An Address

ENTITLED

A FEW JOTTINGS IN PHYSIOLOGICAL MEDICINE.

Delivered before the British Balneological and Climatological Society on May 21st, 1903,

BY GEORGE OLIVER, M.D., F.R.C.P. LOND.

MR. PRESIDENT AND GENTLEMEN,—One of the far-reaching branches of physiology which has of late years been pressed into the service of medicine is the study of blood pressure and of the distribution of the blood. I propose to-night to glance at a few sections of this interesting chapter of physiological medicine which have more particularly engaged my attention during the past year or two and which may be of interest to some of you as practitioners in balneology.

NORMAL BLOOD PRESSURE.

The first requisite for the clinical study of blood pressure is a knowledge of the normal blood pressure, for that is, of course, the standard to which clinical deviations should be referred. It is well recognised that in healthy subjects it is liable to very appreciable variations above and below a certain mean and these extremes of normal fluctuation should be familiar to the practitioner. They are due to such physiological conditions as the ingestion of food, exercise, and temperature. I have taken the opportunity afforded by the past winter's rest from clinical work to study afresh these normal fluctuations of the circulation and I will now sketch an outline of the results. It may appear to you to be somewhat of a reversion nowadays to re-examine some of the elementary facts in our studies of blood pressure, but I think you will agree with me that the best possible assurance we can have of advancing securely in a somewhat untrodden field like this is to retrace our steps occasionally and to re-test the safety and soundness of the track. In so doing we may verify or correct our position and, moreover, we may perchance pick up a few fragments of truth which before we passed by unheeded. For the most part the observations on the arterial pressure were made with the hæmodynamometer, but Hill and Barnard's sphygmometer and Gärtner's tonometer were likewise used.

I have elsewhere[1] shown how delicate readings of the arterial pressure may be read for physiological purposes by the blood-pressure gauge. A small artery (like the superficialis volæ) is selected and the pulsation of the indicator is gradually developed to its maximum degree by gently increasing the pressure on the water pad when the reading is made and then it is found that beyond this point the motion at once diminishes. With a little practice differences of even one or two cubic millimetres of mercury may be reliably read. I have found it useful to use rubber covers[2] which can be placed over the pad so that the motion of the radial pulsation can be limited to a similar minimum range. This arrangement makes the reading of the arterial pressure taken from the radial more precise and prevents a secondary rebound of the indicator, which is apt to be produced in some cases when a high pressure is applied to the pad and which may lead an observer to think that the arterial pressure is higher than it is.

THE INFLUENCE OF DIGESTION ON THE CIRCULATION.

During the past winter I have been much interested in the effects which the ingestion of food produces on the circulation. I had previously worked on this subject and the results of the observations then made, and published in 1901, were confirmed: but this more thorough and more critical inquiry has revealed an extension of these results. It has shown that the ingestion of food initiates a most interesting series of circulatory events which recur with perfect regularity after every meal. The observations have proved that the influence exerted by the act of digestion on the circulation is not a mere transitory one, which may pass away, for example, within half an hour or so after a meal; it is a much more prolonged physiological disturbance which can be traced for fully three or four hours.

I will first describe the effect of digestion on the arterial pressure, then on the capillary and venous pressures.

In Fig. 1 are recorded hourly observations of the mean arterial pressure throughout the day from 8.30 A.M. to 10.30 P.M. in a subject leading an ordinary quiescent life with comparative rest of the muscles. You observe that the pressure follows a rhythmical course, that there is a marked rise immediately after each meal which attains its maximum development in an hour and then the pressure slowly subsides. This wavelike rise and fall of the arterial pressure produced by each meal last from two and a half to four hours. I have observed that the amplitude and length of the curve are, as a rule, proportionate to the size of the meal. The observations show that the average maximum rise of the mean arterial pressure attained in an hour after a meal amounts to 15 cubic millimetres of mercury, though it may reach 20 cubic millimetres; for example, a typically normal wave should rise from 100 to 115 cubic millimetres and then gradually return to 100 cubic millimetres.

FIG. 1.

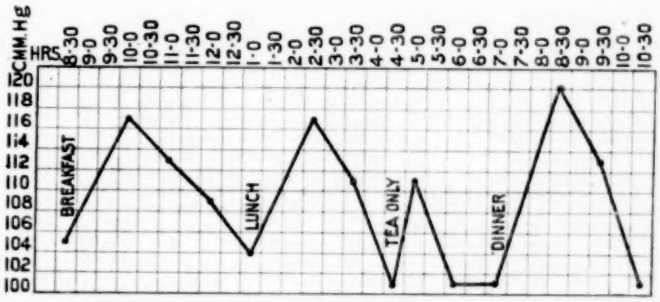


Chart showing the hourly observations of the mean arterial pressure.

Now you will naturally ask: Why should we have a rise in the arterial pressure after meals, when dilatation of the splanchnic arterioles should make for a lowering of that pressure? Observation with the arteriometer shows that the arterial calibre is slightly lessened when the splanchnic diversion takes place. There is therefore apparently a compensatory reduction of the systemic area of the circulation and the increased tonus of the arteries is one factor in raising the arterial blood pressure, the other being cardiac—an increase in the output of the ventricle and stimulation of ventricular contraction. These digestive waves are also present when the arterial pressure is above the normal range.

In determining the arterial pressure in clinical work a correction for the influence of digestion on the mean arterial pressure may be usefully made by applying the following rule: to deduct 10 cubic millimetres of mercury from a pressure observed within two hours after a meal and five cubic millimetres of mercury during the third hour. The best time to make a reliable observation of the mean arterial pressure is within an hour before a meal.

The study of the capillary and venous blood pressures during the digestive circulatory wave has likewise afforded some interesting results. The venous blood pressure is easily determined by a method of using the hæmodynamometer elsewhere described,[3] but so far no reliable method of gauging the capillary blood pressure has been suggested. I have, however, employed a method which is simple and practical, but as I hope to improve it I will not now describe it. This method has, so far, shown that the capillary blood pressure is consideraoly raised at the acme of the digestive circulatory wave and that it then gradually falls during the decline of the disturbance. The rise and fall of the capillary

[1] See Blood and Blood Pressure, 1901.

[2] Made by Mr. Hawksley, 357, Oxford-street, London, W.

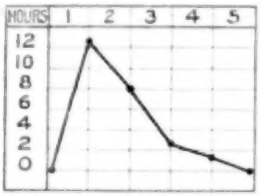
[3] See the Journal of Physiology, Cambridge and London, 1898, and Blood and Blood Pressure, 1901.

blood pressure therefore coincide with those of the arterial blood pressure. The venous blood pressure, on the other hand, generally falls during the full development of the digestive circulatory wave; and when it does not fall it fails to rise with the capillary and arterial pressures. These facts suggest that the venules—endowed, as you know, with muscular tissue which surely serves some purpose in the economy of the circulation—play an important part in regulating the capillary blood pressure; at one time, as at the acme of the digestive wave, contracting and so increasing that pressure and then relaxing and letting it down again. This regulating influence of the venules, however, only comes into play when the body is at rest, for it is overcome during exercise which raises both the venous and the capillary pressures together. I have just lately discovered that my friend, Sir Lauder Brunton, so long ago as in 1879 when writing on the contractility of the veins anticipated this function of the venules. "It is obvious that if venous radicles contract they may oppose a resistance to the flow of blood in the capillaries and by thus increasing the pressure within them may cause more fluid to exude from them into the tissues."[4]

Why should the capillary pressure be raised during the digestive disturbance of the circulation? As suggested by Sir Lauder Brunton a rise in capillary blood pressure may cause an increased exudation of tissue fluid. The experimental work of Ludwig and Noll,[5] of Starling,[6] of Lazarus-Barlow,[7] and of others undoubtedly supports this view and, following a new method of observation by which the tissue lymph may be measured, I have been fortunate enough to obtain confirmatory evidence of it in man. May not these periodically recurring variations of the capillary blood pressure which accompany the act of digestion be of supreme importance in nutrition? Moreover, do they not afford us a glimpse of a much broader fact than is signified by the mere act of digestion? For when food is taken there is, it would seem, not only the internal flow of the digestive secretions, but likewise a concurrent exudation into every tissue of nourishing fluid expressed from the blood into the interstitial spaces. Should further inquiry substantiate this view the physiological significance of the prolonged rhythmical movement in the circulation produced by the ingestion of food will be apparent.

In reading quite lately Pawlow's lectures on the work of the digestive glands I could not avoid observing the similarity of the form and duration of his curve of the secretion of gastric juice in the dog after a meal with the curves of arterial blood pressure incited by digestion in man—as if both were concurrent events which proceeded from the same physiological movement in the system. For the purpose of comparison I have reproduced one of Pawlow's gastric juice curves in Fig. 2. I have observed that the

FIG. 2.



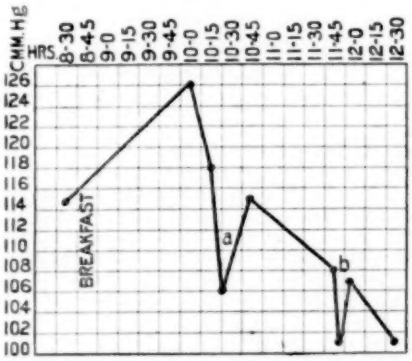
Curve showing the secretion of the gastric juice after a meal of flesh. After Pawlow.

beverages tea and coffee produce a similar rhythmical disturbance of the circulation to that which follows the ordinary meals; it is, however, less pronounced and shorter (see Fig. 1).

THE INFLUENCE OF EXERCISE ON BLOOD PRESSURE.

It is now well known that the primary effect of exercise is to raise the arterial pressure, but I do not think that it is as generally recognised as it should be that this immediate rise of pressure is but temporary and is soon succeeded by a marked fall, which fall continues during the further continuance of the exercise and for some time after the cessation of it. The peripheral tubing very soon widens and the rise is thus converted into a fall. Fig. 3 illustrates how quickly and how effectually the mean arterial pressure may be lowered by merely throwing the muscles of the limbs and trunk into a state of contraction for short intervals. You

FIG. 3.



Showing the effect of two minutes' static contraction of the muscles (a and b) on the digestive curve of the mean arterial pressure.

observe two deep indentations in the curve of the digestive wave: they are the impressions made on the normal course of that curve produced by throwing the muscles into a state of sustained tension for two minutes. In spite of these interruptions the digestive wave of blood pressure continues its course, and ultimately subsides in a normal manner. The effect is therefore only temporary; but it is instructive in showing how great is the power of muscular contraction to lower the arterial blood pressure. This is the fundamental fact in resistance exercises. But this fall in the arterial pressure is but a portion of the physiological fact which we are now studying; it is simply the result of the widening of the arterioles produced by the muscular contraction—a fact which is proved by the rapid, though transitory, concurrent rise in the capillary and venous blood pressures. It therefore follows that mere static muscular contraction lets down, as it were, a large volume of arterial blood into the capillaries and in this way brings more oxygen within reach of the tissues and thus raises the metabolic processes. But it may do more than this, for by raising the capillary pressure it may greatly accelerate and increase the flow of interstitial fluid filtered from the blood into the vacuoles of the tissues and may thus flush these spaces and favour the clearing away of residue from them. From the clinical standpoint such effects as these produced by muscular action should prove useful in the treatment of diseases of the suboxidation type in which the removal of waste products is imperfect, as in chronic gouttiness.

A large group of our cases at a health resort have as a prominent feature of their circulatory disturbances a hypertonic[8] state of their arteries and arterioles and in a large majority of these cases the mean arterial pressure is considerably raised. In some such cases both the capillary and venous pressures are lowered together, showing the predominance of arteriolar contraction, while in others the capillary pressure is raised along with the arterial while the venous pressure is lessened, indicating the preponderance of venular contraction. Now, in such cases the pulse is generally felt to be small and is often reported as feeble and the hands and fingers are apt to be clammy and cold and sometimes they may even afford a cold fish-like impression to the touch, but when the capillary pressure is raised the hands are generally warm. The unguarded physician is apt to regard these signs as indicating a feeble heart and a weak circulation, and when he places his hand over the apex and finds it displaced outwardly he is confirmed in that view. In many such cases the heart muscle remains unaffected but in nearly all the second aortic sound is markedly accentuated. In nine out of ten such cases the trouble originates in the periphery of the circulation. The physiological tonus of the arteries, arterioles, and venules has passed the normal bounds and become pathological. There is, in fact,

[4] Collected Papers on the Circulation and Respiration, by Sir Lauder Brunton, F.R.S., 1903, p. 567.
[5] Zeitschrift für Rationelle Medicin, 1850, Band ix., S. 52.
[6] Journal of Physiology, Cambridge and London, vol. xvii.
[7] Ibid., vol. xvi.

[8] The convenient term "arterial hypertonus" was first employed by Dr. W. Russell (THE LANCET, June 1st, 1901, p. 1519).

a persistent hypertonic condition which often threatens to overmaster the ventricle. The embarrassment is peripheral, and the bravely acting heart muscle is apt in time to yield, and, indeed, does very frequently yield, and then there is established a new centre from which a fresh series of pathological deviations emanate. In a large majority of such cases the physiological measures applied at a well-equipped balneological resort will rectify the disordered peripheral mechanism; and then the blood-pressures (arterial, capillary, and venous) either approximate to their normal relationship to one another or they become normal. Then it becomes after the course of treatment a matter of some importance to suggest such simple methods of preventive management as may be easily followed up at home so that the benefit acquired from the visit may be maintained. Among other measures designed to this end I have found static or tension exercises of considerable value. At first the duration of the sustained tension of the muscles should be brief—so as not to be irksome—and as time goes on it should be lengthened. The exercises should be practised perseveringly at all odd times and seasons, but especially during the hour before every meal—this being the time when nature herself produces a normal fall in the arterial blood pressure. It is interesting to find how such exercises will frequently warm the extremities. One patient (a medical man) volunteered the remark that in his case the effect resembled that of a dose of nitro-glycerine; and that reminds me that Brunton and Tunnicliffe suggested in a recent article that muscular contraction may produce some product which possesses the property of dilating blood-vessels.

It is apparent that the ultimate physiological effect of muscular contraction on the circulation is much the same as that induced by warmth—namely, a widening of the peripheral channels and a consequent easing of the work of the heart and a proportionate lowering of the arterial pressure. But beyond this result common to both there is a difference between the therapeutic effect of warmth and that of exercise, for heat merely relaxes muscular fibre, while exercise—even though tiring at the time—is followed by improved tone and vigour. It seems to me that physiology has a promising suggestion to offer to account for this difference; for Ranke showed that whenever muscles contract they absorb water from the blood. Now that water is proteid-containing water, which, after serving the immediate needs demanded by the contraction, may provide for repair and construction. So that we may say that exercise, like heat, expands the contracted peripheral mechanism and thus reduces the consequent increased arterial blood pressure, but does more than heat in providing for repair.

It is an easy matter to test this lowering effect of muscular tension on the blood pressure during the course of your examination of a case. I have frequently done so. Of course, you must see that the patient breathes quietly and regularly when he throws the muscles into static contraction. You will not uncommonly find, when the arterial pressure is raised while the venous is lowered, that after a minute's muscular tension the former will fall 20, or even 30, cubic millimetres of mercury and the latter will be doubled.

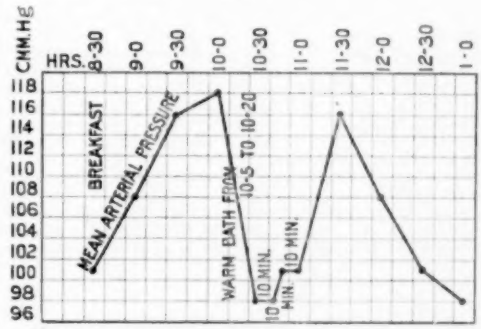
THE INFLUENCE OF TEMPERATURE ON BLOOD PRESSURE.

We now come to the third leading cause of variation in the blood pressure—namely, temperature. We are all familiar with the contracting influence of a fall of temperature on the arterial wall with rise in blood pressure and the relaxing effect of warmth with lowering of that pressure; but few of us, I think, quite realise how powerful is the influence of changing temperature, not only on the systemic blood pressure, but on all the physiological processes governed by that pressure. With a view of obtaining some evidence bearing on this point I registered daily at 8.30 every morning for over three months during last winter the mean arterial pressure and some other physiological data, as well as the temperature, as recorded in Stevenson's screen and in the room. Though these observations on the circulation were made in the house and before experiencing the influence of the outside air the record obtained was certainly instructive, for it showed that the circulatory mechanism is very sensitive to thermic variations in the weather. The record is, of course, too long to quote in detail. Suffice it to say that the average reading of the mean arterial pressure was 120 cubic millimetres of mercury for all the screen temperatures below 38° F. and 107 cubic millimetres of mercury for all those above that temperature.

Such striking effects being traceable in a normal subject we gain some notion of the disturbing influence of thermic changes of the weather on many of our sensitive patients. Thus it may be that "cold snaps" (as they are popularly called) may throw as much additional strain on a yielding ventricle as may result from an uphill walk, even though the patient be quiescent. Surely our patients suffering from arterial hypertonus need quite as much the protecting influence of an equable winter and spring as do our bronchitic invalids.

Fig. 4 shows the effect of a warm bath (temperature 100°)

FIG. 4.



Showing the effect of a warm bath on the digestive curve of the mean arterial pressure.

on the mean arterial pressure taken a little over an hour after a meal. You observe how deeply it indents the normal course of the digestive wave of blood pressure. The influence of warmth quickly passes off, as in this example. It is nevertheless a great power when judiciously directed in balneological practice. It acquires its force as a curative agent by repetition, as in a course of baths. My physiological observations have suggested that in certain cases the beneficial influence of warm-immersion bathing may be enhanced by directing the patient to throw the muscles into a state of tension for short intervals during the immersion. In this way the dilating effect on the periphery of the circulation is increased and the warm bathing becomes less relaxing. I have also found it useful to direct those patients who suffer unduly from the exhausting effects of warm-immersion baths to contract the abdominal muscles frequently, so as to reduce the abdominal stasis which warmth encourages. Massage, and especially abdominal massage, is also a valuable addition to the warm-immersion bath.

To return from this slight digression. Cold may raise the line of the digestive curve on the blood-pressure scale, so that the commencement and the finish may read from five to 10 cubic millimetres higher than the strict normal (100) and warmth may lower these points two or three cubic millimetres. These figures furnish somewhat of a guide to the clinical correction for the effects of temperature on the arterial pressure.

It will be recognised from this sketch of the respective parts taken by these three leading causes of variation in the arterial pressure—digestion, exercise, and temperature—that the influence of digestion is paramount and constant, for the long curves of rise and fall produced by the meals recur with perfect regularity and persist beyond the temporary variations of the blood pressure produced by muscular action and by temperature, which therefore modify the line of these curves in a mere transitory way.

THE INFLUENCE OF ALTITUDE ON THE BLOOD PRESSURE.

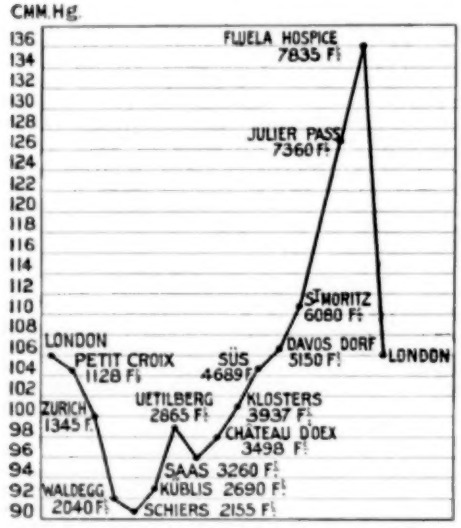
In the winter of 1899–1900 I made some observations at Arosa (5800 feet) in Switzerland on the mean arterial pressure with the view of ascertaining the effect of altitude upon it. These observations led me to conclude that in the winter months the blood pressure is raised in high altitudes. Inasmuch as intensely cold weather prevailed during the visit I could not on that account regard my observations as altogether conclusive, especially, too, as other observers were led to believe that altitude lowered the blood pressure. Summer is undoubtedly a more suitable period of the year

for observations of this kind than winter, for then there is less liability to encounter the disturbing influence of a low temperature. Unfortunately for myself, I can only make any such observations in the winter; still, even then they may prove instructive—for if it be a fact that altitude does lower the blood pressure and if that lowering influence is apparent in the cold months it should on this account be all the more readily accepted.

Having last January and February five or six weeks at my disposal I spent them in Switzerland, where I made a large number of observations at different altitudes, and at some (Château d'Oex, St. Moritz, Zürich, Klosters, and Süs) the blood pressure was taken at different times. At Château d'Oex (3498 feet) and at St. Moritz (6080 feet) serial observations were made at 8.30 every morning in a warm room and a number of digestive waves were recorded, and the effects of exercise on the blood pressure at these altitudes were also determined. Having previously to the visit made a large number of observations of the blood pressure under the same conditions at home I had the advantage of having a well-worked-out standard for comparison. Besides these observations on myself I made others on another subject, on many visitors, and on some residents.

Now what is the teaching afforded by the three groups of the observations—namely: (1) those made apart from the influence of digestion and exercise; (2) those afforded by the digestive waves; and (3) those furnished by exercise? In Fig. 5 are plotted out the mean arterial pressure deter-

FIG. 5.



Showing the mean arterial pressure taken at 8.30 A.M., or an hour before a meal, at various altitudes in Switzerland in January and February, 1903.

mined at 8.30 A.M., or an hour before a meal, in a state of rest in London and at 14 different altitudes, advancing progressively from 1128 to 7835 feet. You will observe that at about 1000 feet there is no appreciable change; that a marked fall is apparent when a little over 2000 feet is reached; that at 3500 feet (Château d'Oex) the blood pressure, though somewhat higher than at the lowest point reached, is much lower than at home; and that above that altitude (3500 feet) there is a rise progressive with the altitude until we reach the highest point, the Fluela Pass (7835 feet). The digestive waves of blood pressure at Château d'Oex began at, and fell to, a much lower point on the blood pressure scale (97 cubic millimetres) than at St. Moritz (110 cubic millimetres). The effects of exercise on the arterial pressure also show that the pressure is lower at Château d'Oex than at home or at St. Moritz and that it is higher at St. Moritz than at home. At home the usual effect of active exercise is to cause a fall of my arterial pressure to 97 cubic millimetres (observed just after the exercise is over). At Château d'Oex a similar amount of exercise reduced the pressure to 92 cubic millimetres, but at St. Moritz I could not diminish it below 105 cubic millimetres.

After completing the foregoing observations I made some interesting readings of the arterial pressure at Zürich where there is a railway which ascends in half an hour from 1345 feet (Zürich) to 2865 feet (Uetliberg) with a midway halt, 2040 feet (Waldegg). The uniform temperature and rest of the railway carriage afforded the most favourable conditions for comparable observations of the blood pressure. The results furnished by the up and down journeys, which corroborate each other, appear in Fig. 5 and confirm in a general way the previous observations made at similar altitudes. The concurrent testimony of all these observations made in winter points, I think, to the conclusion that altitude does lower the blood pressure within certain limits—and especially so between 2000 and 3500 feet—above which the pressure rises.

When one thinks of it, it is surely improbable that altitude should either lower or raise the blood pressure progressively throughout all gradations, for in either case life would soon be threatened or would cease. We know that nature when dealing with organic life does not, as a rule, work in straight lines; it is but the limitations of our view that give us that impression. She is ever deviating by her corrections to her beneficent ends. We should not, therefore, be surprised by this contrary effect of altitude on the blood pressure, as it is apparently but an example of this universal law, for the observations suggest that at a certain point the lowering influence of the reduced atmospheric pressure is met by an adjustment on the part of the organism. How is this adjustment brought about? The observations show that in the higher altitudes (6000 feet, as at St. Moritz) the heart's action is more frequent and the calibre of the arteries is somewhat smaller than in the lower elevations (3000 feet or so, as at Château d'Oex). The morning observations give an average pulse-rate of 76 at St. Moritz and of 71 at Château d'Oex and an average radial calibre 0·4 millimetre less at the former than at the latter place. I think we may therefore conclude that the progressive rise in the mean arterial pressure observed in the higher elevations is the result of an increase of the output of the heart and of the normal tonus of the arteries. Observations at St. Moritz on several visitors—even on those who had been sojourning there for two and three months—and on one whom I had observed at Château d'Oex were exactly similar to those on myself; but those made on a few natives showed that the mean arterial pressure in them was lower—in fact, it was much the same as in England. From this it may be inferred that acclimatisation in a high altitude is not a question of a few months only.

I am sorry that I could not prolong my visit so as to extend these observations to other altitudes and to verify or to correct those already made by repetition, and I regret this the more because at the highest point reached—namely, on the Fluela Pass (7835 feet)—it seemed to me as if a second compensation, having for its object a reduction of the blood pressure, were coming into play—namely, a vagus effect. I hesitate to mention this single observation as there may be nothing in it. I was, however, struck with the fall of 10 beats per minute below the average pulse-rate which I had observed at St. Moritz, as a slow pulse at the highest altitude reached seemed to be somewhat noteworthy. Should a vagus effect develop in still higher elevations it would, of course, counteract the rise of blood pressure maintained by a further increase of the arterial tonus and might afford a suggestion as to the cause of that mysterious ailment "mountain sickness."

I merely give you my limited observations, which without further extension you should regard as but tentative, though they were made with care so as to exclude fallacies as much as possible. I trust that other observers may be induced to take up this work and to report their results. Climatology is sorely in need of exact physiological data and we cannot have too many good observers. I think it is highly probable that in the warm months the lowering influence of altitude on the blood pressure may extend to a much higher limit than my observations made in winter indicate, for warmth reduces the arterial tonus. But so far as these observations go I am inclined to think that they have a suggestive bearing on practical climatology. I am not aware of a climatic condition that will lower the mean arterial pressure to the same extent as the medium altitudes. Why should we not think of this when deciding where to sent some of our patients with *plus* arterial pressure in the

winter months? Then, again, our colleagues at Aix-les-Bains and other bathing resorts abroad for the gouty wisely advise their patients after the course to resort to a moderate altitude for their "after cure"; now according to these observations this advice may mean that the effect of the baths in lowering the arterial pressure will be maintained until the patient has recovered from the strain of the treatment. Then there is a thought that will occur to you in connexion with the higher blood pressure maintained in the winter by the higher altitudes. These should be well adapted to the climatic treatment of cases which require construction and repair, such, for example, as the phthisical, and should be contra-indicated in cases in which the removal of waste products should be the keynote of treatment, such as in gout and chronic Bright's disease, and should be further contra-indicated when we cannot be sure that the heart muscle will safely bear the additional strain of a high altitude.

[The address concluded with some remarks on the clinical value of determining blood pressure and on the importance of adopting such methods of observation as exclude the personal equation as much as possible and render clinical data equally appreciable to all.]

An Address
ON
PARASYPHILIS[1]

Delivered before the Fourteenth International Congress of Medicine held at Madrid in April.

BY GEORGE OGILVIE, B.Sc., M.B. EDIN., M.R.C.P. LOND.,

PHYSICIAN TO THE FRENCH HOSPITAL AND SENIOR PHYSICIAN TO THE HOSPITAL FOR EPILEPSY AND PARALYSIS, MAIDA VALE, LONDON.

WITH an Apollonian "Inventum medicina meum est," Fournier proclaims himself the "inventor" of parasyphilis. Indeed, the numerous contributions to the subject which have followed the publication of his work in 1894 seem to me more or less *μιᾶς φωνῆς πολλαὶ ἀνταναklάσεις*—the re-echoings of his powerful and far-reaching voice. Thus to discuss the principles of the doctrine and its bearing on retrospective diagnosis and treatment means nothing else than to discuss the principles laid down and the conclusions drawn in Fournier's writings. I am therefore justified in closely following and limiting myself to his line of argument. Dr. Edmund Fournier's book on the same subject I shall treat as one of his father's, as he himself declares, "que son père en reste l'inspirateur et l'auteur anonyme."

A parasyphilitic affection is defined as one syphilitic in origin but not in nature. Its two characteristic features are the following: 1. Parasyphilitic affections are to be met with independently of syphilis; they may be due to other causes as well, they are *banal*,[2] while syphilitic lesions, properly so called, such as mucous patches and the gumma, are never produced outside the domain of syphilis. 2. The so-called specific drugs—i.e., mercury and iodide of potassium—have a totally different influence upon parasyphilitic affections from that which they are known to exercise upon true syphilitic lesions. "There is really an abyss between the one and the other." These drugs are said to have either no effect at all upon parasyphilis or the effect is slow and incomplete, while in the case of syphilis proper it is "rapid and efficient." "These two principal features," according to Fournier, "seem to establish a well-marked line of demarcation between syphilitic affections proper and the so-called parasyphilitic ones."

If from a clinical point of view the specificity of the mucous patch[3] and the gumma has to be granted there still remain among true syphilitic lesions a great many which, to use Fournier's own words, are "banal and borrowed from ordinary pathology." As such he himself mentions the disturbances of the general health, fever, anæmia, asthenia, wasting, cachexia, &c., as well as aches and pains, neuralgias and neuroses, which have nothing specific besides their origin. He also mentions rashes of the skin, so similar to, and so much resembling, common rashes that the most expert dermatologist is unable to differentiate between them. But the list of non-specific yet truly syphilitic lesions is by no means exhausted. Mr. Hutchinson has made the remarkable statement that all the various phenomena of disease due to syphilis are imitations of other non-specific type forms. "We have," he says, "absolutely no malady which is peculiar to syphilis." Without going so far it will have to be granted that, apart from those mentioned by Fournier himself, numberless affections, such as iritis, choroiditis, hemiplegia, paralysis of single nerves, transverse lesions of the spinal cord, &c., present nothing specific apart from their origin. Nobody would think of excluding all these manifestations of true syphilis from the domain of syphilis proper under some other name for the sole reason that they are "banal." Moreover, there is among those who grant the specificity of certain syphilitic affections a great diversity of opinion regarding the affections deserving of such a distinction—viz., to be considered pathognomonic. Take, for instance, interstitial keratitis. I believe that notwithstanding the statement just quoted, Mr. Hutchinson does not hesitate to base the diagnosis of inherited syphilis on this symptom alone. It is the same with the notched teeth which go by his name. And with regard to either symptom he has many convinced followers. According to Fournier, and perhaps the majority of syphilographers and ophthalmic surgeons of our time, both symptoms are to be met with in other diseases besides syphilis, they are "banal." Interstitial keratitis is to some nothing but an expression of impaired nutrition, to others as frequently of tuberculous as of syphilitic origin. Leucoderma is given by Fournier as the classical prototype, the type *par excellence*, of a parasyphilitic lesion. On the other hand, I. Neumann of Vienna says that there exists at present only one opinion—viz., that leucoderma is *absolutely* characteristic of syphilis. Very few, I believe, will not subscribe to this statement. Opinions are likewise divided with regard to ophthalmoplegia externa, to the skin infiltration of the newly born, to certain forms of choroiditis, to spastic spinal paralysis, &c. On the other hand, it seems that at least one parasyphilitic lesion does not deserve the designation "banal," if one is to go by the frequency with which syphilis can, according to Fournier, be proved in its previous history—i.e., tabes. He has found that of 36 observations in reference to gumma of the palate 44 per cent. were without a syphilitic history. He confesses that this proportion is extraordinary and unusual and taking into account the possible error caused by what he calls "*la chance des séries*"—i.e., the accidental similarity or identity of a number of consecutive cases—he proposes to reduce it and even to diminish it by one-half—a reduction on a most extraordinary scale considering the probability of such serial sequence. That would still leave 22 per cent. without a syphilitic history. Syphilis as a cause of tabes, according to Fournier, is present at least nine times out of ten—i.e., there are less than 10 per cent. without a history of syphilis. If one takes into consideration the mental state of some of the patients on whom we have to rely for their previous history—"without mentioning all the cases of syphilis abnegated or wilfully concealed, of syphilis overlooked or unnoticed, also the cases of conceptional hereditary syphilis"—one would scarcely be surprised to find the final figures on the *other* side of a hundred, in the same way as the addition of certain mortality statistics leads to figures in excess of the birth-rate. I may be allowed to remark that from my own experience, which extends over more than 140 hospital and no small number of private cases, I am personally convinced of the important part which syphilis plays in the production of tabes without, however, going to extremes or even believing that the question has been finally settled. Different observers from different parts of the world have pointed to the non existence or infinite rarity of tabes in districts where syphilis rages endemically. At the first glance this seems to be a very strong argument against the specific origin of tabes. Yet it has to be borne in mind that exactly the same has been reported with regard to other affections, which in our climes at least are undoubtedly a frequent consequence of syphilitic infection, such as diseases of the eye. How far functional

[1] As the author was unable to be present at the Congress the paper was kindly read in the original (French) by Sir Dyce Duckworth.

[2] The term "banal" is used by Fournier as meaning non-specific or as contrary to specific.

[3] It is strange to find Fournier constantly using a term against which he has so long and so vehemently waged war.

use or "irritation" influences the localisation of the noxious effects of the syphilitic poison we do not know. With the present state of our knowledge we must confess that certain facts in the pathology of tabes are only with great difficulty, if at all, reconcileable to the doctrine of its syphilitic origin. Anyhow, it seems strange to call an affection "specific" which in its antecedents lacks evidence of syphilis in from 22 to 44 per cent., while another should be "banal" with less than 10 per cent. I am not aware that this strange contradiction has been pointed out before, much less that it has been satisfactorily explained. In his recent careful and interesting statistics of tertiary syphilis Neisser gives the percentage of those who present tertiary symptoms without a history or evidence of previous infection at about 50. How can it, then, be explained that an affection likes tabes, which after all belongs to the late sequelæ of the disease, should in its previous history afford evidence of syphilis with such astounding frequency? The only explanation which presents itself to my understanding is that some seekers after syphilis will seek and find even an "absent argument." For general paralysis the percentage is by several authors given as high as for tabes. The obvious consequence would be that the disease cannot be called "banal." Banality, one of the "characteristics" of parasyphilitic affections, is, as we have seen, not an attribute of all of them, while it is an attribute of numberless syphilitic affections. Which particular affections are to be considered specific, which "banal," is, after all, to a large extent a matter of personal opinion. Anyhow, the most banal of lesions may be and frequently is syphilitic.

With regard to the second "characteristic"—the influence of specific drugs—it must be admitted that this seems only a question of degree. Of course, in many syphilitic affections the effect of mercury and iodide is "at once intense and rapid." But I am not going to enumerate all those in which it is slow, little, or none. Quite apart from cases of idiosyncrasy to the drugs, or cases of malignant syphilis, one has only to think of the many disappointing results in cases of hemiplegia, choroiditis, ophthalmoplegia, spastic spinal paralysis, &c., to realise the incongruity of making the effect of the drug a criterion of the nature of the disease. On the other hand, it is not generally admitted that specific drugs are powerless in leucoderma, tabes, and general paralysis. Good results have been reported in general paralysis and in tabes which unfortunately I have never been able to obtain. Fournier himself has had most satisfactory results, amounting to *complete cures*, in cases of parasyphilis, where one would expect them least—viz., in certain heredo-syphilitic dystrophies—and he advocates mercurial treatment in most cases in which parasyphilitic affections are met with in children only suspected of heredo-syphilis. "Those who think that the result of treatment by specifics may be relied upon as establishing the diagnosis may easily make great mistakes. Syphilitic affections often resist treatment for a long time (I may add, even altogether) and, on the other hand, mercury and iodides often effect the greatest possible good in cases which are not syphilitic" (Hutchinson). How, then, could a "characteristic" of this kind be of use in drawing a line of demarcation between two classes of affections supposed to differ in nature? Later on I shall have to say a word on the "nature" of parasyphilitic affections in general. Of the arbitrariness which must of necessity reign in allotting a certain disease to one of the two classes of affections I want to give at least one instance. Interstitial keratitis, according to Fournier, is not necessarily syphilitic, an opinion in which I concur. All will agree that if at all it is neither rapidly nor intensely influenced by drugs. Its course may be shortened and attenuated, but on the whole it is an affair of many months, whether treated by specifics or not, it is never cut short by them, and with the most energetic treatment is often extremely tedious. Yet this affection, bearing both the characteristics of parasyphilis, is not classed under the latter. This example conclusively demonstrates that either of the two criterions taken singly, or together, is utterly unfit to decide anything respecting the nature of the disease. Take, for instance, a case of spastic spinal paralysis, or of choroiditis (both "banal" affections) of undoubted syphilitic origin, as proved by the co-existence of such specific lesions as a gumma, which latter disappears under specific treatment, while the paralysis or the choroiditis remains little or not at all influenced. Such cases abound. Was the "banal" affection syphilitic or parasyphilitic? It was, of course, syphilitic, although it bore both the characteristics of parasyphilis—viz., banality and refractoriness to specific treatment. The classical type of parasyphilis will, after all, be a scar left by some ulcerative syphilitic process—for instance, an ulcerative gumma. Here we have a lesion of undoubtedly syphilitic origin and possessing the qualities of banality and refractoriness to treatment. If one were to object that a scar cannot properly be called an "affection," it has to be remembered that the terms "affection," "stigma," and "lesion" are all through used promiscuously by Fournier. A scar certainly is a stigma, and intra-uterine amputation stumps or dental erosions are no more "affections" than scars are. But there seems no need for inventing an extra name for a scar left by a pathological process, nor can anything be gained by huddling together distinct pathological processes—as, for instance, pneumonia, corneal ulcer, &c., when due to the same cause, e.g., measles—under the denomination of parameasles.

With regard to the parasyphilitic affections following acquired syphilis I shall have to say only a few words. The connexion of tabes and general paralysis with syphilis seems to me established by carefully and critically sifted clinical evidence. Nothing of the kind can be said of any other parasyphilitic lesion attributed to the acquired disease, such as neurasthenia, hystero-neurasthenia, hysteria, epilepsy, &c. Of course, in a neurotic person syphilis may, and will, like any other disease, play the part of *agent provocateur*. In this way syphilis will be responsible for many manifestations of the variegated disease called neurasthenia. But so will gonorrhœa, or a cold, or any other complaint befalling a neurotic person. To give an idea of the degree to which syphilis may react on the mind and consequently on the nervous system Fournier cites the case of a young man who on being told that he had an indurated chancre immediately went home and hanged himself. Of course, suicide here seems parasyphilitic *par excellence*, although parasyphilis at a remarkably early stage. Its syphilitic origin is beyond doubt, it is eminently "banal" and past cure. A similar event has quite recently been reported by another eminent syphilographer in a case of gonorrhœa. It would seem odd to describe it as paragonorrhœal, yet there is apparently no reason why the frequent and profound disturbances of psychical functions following this disease, particularly in its chronic stage, should be treated differently from those caused by syphilis. In the new "Traité de Syphilis" by Fournier the functional disorders of the nervous system during the secondary stage are treated at considerable length. Here they are described as syphilitic and specific treatment is urgently recommended as the only and certain remedy. In his book on parasyphilis the identical nervous disorders are treated at the same length and the complete inefficacy of specific treatment is given as proof of their parasyphilitic nature. It seems that exactly the same nervous complaint during the same stage may, in his opinion, be either syphilitic or parasyphilitic, either only curable by specifics or not at all. That strange symptom boulimia, as a manifestation of syphilis, although by no means unknown in the country of beef-eaters, appears in the "Traité" as a syphilitic disease, the symptom of a "diathesis, which requires the treatment necessary for that diathesis and nothing more." In the work on "Parasyphilis" this very same boulimia appears (in a footnote) as a parasyphilitic affection the characteristic of which is not to yield to specific treatment. Evidently we are to understand that during the secondary stage of syphilis there is a boulimia syphilitic, and apart from it a boulimia parasyphilitic, both affections "banal," the one curable and curable by mercury alone, the other not amenable to mercurial treatment. Such incongruities are the natural outcome of the capricious principle underlying the whole division between syphilitic and parasyphilitic lesions.

The seed of parasyphilis has yielded a much richer harvest in hereditary than in acquired syphilis. If one looks at the list of parasyphilitic affections attributed to the influence of syphilis on the offspring one is at once struck by the variety of the pathological conditions which meet the eye. There are inflammatory processes, progressive degenerations, dystrophic conditions, dyscrasias, scars, tumours, predispositions, anything from a slight anomaly to monstrosity, from intellectual weakness to complete absence of the brain, from simple uncomplicated debility to "*la morte banale*," moreover moral defects, functional disorders, diatheses, &c. The method by which this ubiquity of syphilis is established is very simple. Every pathological condition which is "banal"

and not rapidly and intensely benefited by mercury found in a heredo-syphilitic subject (or one suspected of heredo-syphilis for the reason that one of the parents or grandparents has at one time suffered from syphilis) is registered as parasyphilitic, and subsequently the cases are arranged under different pathological headings. Of course, in this manner a fairly large number of cases have been collected in which congenital syphilis or a history of acquired syphilis in parents or grandparents has been co-existing with nearly every imaginable pathological condition But co-existence is not causal connexion, and the question of origin, to be satisfactorily answered, requires much more subtle methods than compilation, enumeration, and registration.

Here I wish to take up the thread where it was dropped at the last International Congress in Paris. One of the subjects for general discussion there was the state of health of the descendants of parents who had themselves suffered from congenital syphilis. Some time before the discussion took place Professor Jullien of Paris had addressed an appeal to all specialists, French and foreign, asking for their personal experience on the subject. The result of this collective investigation, although instigated by a member of the profession so widely known and so highly esteemed and on such an important occasion, has been a complete failure. In the list of those who answered the appeal nearly all the foremost names of Europe and America were missing. This fact alone is, I think, a certain indication that to the majority of our most experienced specialists the deleterious influence of syphilis on the third generation was an unknown quantity. Of the 45 observations sent in to Professor Jullien 12 are negative, the remaining 33 being mostly of such a shadowy nature that, exposed to the searchlight of sound criticism, they have to vanish into nothingness; the remaining few are open to more than one interpretation and—of course, a most important point—are too small in number to prove anything at all. If syphilis had an appreciable effect on the third generation this would show itself in more than a handful of cases. Some years ago I pointed out in a paper on the transmission of syphilis to the third generation the extraordinary difficulties which lie in the way of proving such transmission, even if one limits oneself to syphilis proper. Obviously the difficulties are increased a hundredfold if one has to rely on so-called "parasyphilitic" affections, a medley of pathological conditions, in the production of which an infinite number of causes may be operative, not even to be guessed at in the present state of our knowledge. The question put by the last International Congress has remained unanswered. At present the value of parasyphilis as a means of retrospective diagnosis respecting the third generation is *nil*.

Of course, there is more chance of attaining tangible results by setting the mark somewhat nearer and limiting oneself to the next generation. I do not deny, nor do I doubt, that several of the affections classed by Fournier as parasyphilitic are really of syphilitic origin. For instance, there is scarcely any doubt of hydrocephalus and meningitis being in no small number of cases of heredo-syphilitic origin. But why call them "parasyphilitic"? Or, rather, why establish a distinction between two forms of heredo-syphilitic meningitis, the one syphilitic, the other parasyphilitic, as Fournier does? There is no need for any such division, either from a clinical or an anatomical point of view. The more or less marked effect of mercury, the more or less "specific" character of the anatomical appearances (everyone knows what the anatomical signs of syphilitic specificity are worth) do not warrant a division of this kind. Again, Hutchinson's teeth, properly understood, I have never yet met outside the domain of syphilis, but I have met them in a case of undoubted congenital syphilis, in a set of teeth otherwise perfectly shaped, and also in another equally certain case in which several subsequent children were affected in exactly the same manner. I should be loth to call a stigma of such value and precision parasyphilitic, and to class it with a pile of insignificant dental malformations to be met with every day and in every state of health. Of course, it is not amenable to specific treatment any more than the remains of any pathological process which has come to an end—as, for instance, a scar. Tabes and general paralysis also are, as I said before, in all probability closely related to syphilis and when met in children (a rare occurrence) strongly suggestive of hereditary taint. Whether in the end they will turn out to be one and the same process, only differing in localisation, as many believe, or whether they will have to remain two distinct maladies is still a matter of doubt. I do not think, however, that we are advancing in our understanding of their pathological significance by having them linked together under the insignificant term of "parasyphilis." These and a few other affections which we should continue to call "heredo-syphilitic," whatever their "nature" may be, will undoubtedly allow a retrospective diagnosis, if not with absolute certainty, yet with more or less probability, according to the accompanying circumstances. But with regard to the rest of this pathological medley—such as strabismus, hysteria, toothgaps, cataract, giantism, moral gaps, astigmatism, headache, and such like—even if they were occasionally produced by parental syphilis, are utterly worthless for retrospective diagnosis as well as for prospective treatment. Parasyphilis might be called a pathological lumber-room: there may be a few valuable pieces in it, but the greater part is worthless.

On the question of malformations as caused by syphilis I want to say a final word which to a greater or less extent applies to any group of so-called "parasyphilitic" lesions. To establish a causal connexion between syphilis and malformations it is not sufficient to collect a number of cases in which the patient had congenital syphilis or his parents or grandparents a history of the acquired disease. According to Fournier, out of 100 people in Paris "healthy or suffering from any disease whatsoever, there are always from 15 to 20 who are found to be actually suffering from syphilis." Making allowance for the fact that syphilis is ten times less common in women than in men, according to Fournier every second or third person in Paris is likely to have "a family history" if we go as far back as the third generation, and about every fifth or sixth if we limit ourselves to the second generation. This applies to everybody whether malformed or not. What we want is the counter-test—viz., how often is congenital syphilis or a history of acquired syphilis in the two preceding generations to be found in cases of such and such a malformation? And this question has to be put and answered for every individual malformation separately. It is just this kind of evidence which is generally wanting. Club-foot is with a certain predilection given as an instance of a parasyphilitic malformation. M. Léon Courtillier has examined 54 cases with regard to previous diseases of parents, grandparents, and their near relatives with the result that in *one case* only a history of syphilis in the parent (mother) was found. This, of course, proves that his examination with regard to syphilis was hardly complete enough; yet the result is strikingly negative if one considers that he was entitled to about 20 cases without having proved much of a causal connexion. I should make bold to recommend such little arithmetical exercises to those hunters after family histories who try to prove the syphilitic origin of, say, pigment deposits on or near the optic disc solely by inquiring from parents or grandparents whether they had had syphilis. If the grandfather answers in the affirmative and the mother has bad teeth, or squints, a case of heredo-parasyphilis in the third generation will to some seem established. In truth, it is nothing else but to "buckler falsehood with a pedigree." If malformations were caused by hereditary syphilis one would expect to find them with greater frequency where syphilis for several generations has been raging endemically. The recent investigations of Düring in Asia Minor have proved nothing of the kind. Likewise in rural districts, where syphilis is not as frequent as in Paris, its disfiguring influence on the offspring should be less. On the other hand, it is emphatically stated that the same malformations in man are produced by other agents such as alcohol, tuberculosis, nervosity (*la famille névropathique*), acute infectious disease, &c. In these circumstances, in order to demonstrate the syphilitic factor in the causation of these terata, it would be indispensable to collect such cases in which these other factors can be eliminated with at least some degree of probability. Nothing of the kind is even attempted. The clumsy statement of occasional coincidence is offered as proof of causal connexion. It has to be granted that such an attempt would meet with nearly insuperable difficulties due to the practical impossibility of collecting sufficiently complete and reliable family histories extending over several generations and also to the co-existence of several of these factors in nearly every individual case. But even if this impracticable task could be accomplished for a number of cases with regard to the different toxic agents—even if we could exclude these sources of error—nothing much would be gained, because the manifold causes of malformations are for the most part still buried in a "profound sea" of ignorance. To "exclude"

what is hidden in its "unknown fathoms" is, of course, a matter of impossibility. The little which at present we dimly discern of these "secrets of the deep" is not such as to prop up any hypothesis which attributes a considerable share to toxic influences. The "strange issues" of animal birth are not less frequent in all those species which are unexposed to syphilitic or tuberculous infection or to alcoholic intoxication. Certainly they may have toxins of their own with regard to which we are "unobnoxious to be pain'd." Moreover, the "mechanics of evolution" have brought to light many interesting experimental facts regarding the mechanical causation of deviations from the normal course. Finally, phylogenetic reminiscences in ontogenetic evolution seem the foremost factor where the abnormal can be traced back to anterior or lower types. There is, perhaps, although it may sound paradoxical, a large physiological factor in the production of malformations which are commonly considered as pathological only. Anyhow, the whole question is of such extent and depth that it has to be looked upon from an elevated biological standpoint and not through the peephole of a speciality such as syphilography. We are standing just on the threshold of teratology, and we see that the causes which are operative in diverting embryonic development from its normal course are of infinite variety and complexity, for the most part at present beyond our power of conjecture or divination. We know that toxic influence is a factor which plays a part in it, but how large this part is, and whether the syphilitic poison is one which acts in this manner by intra-uterine intoxication, we do not know.

The inconsistency of the theoretical foundation of the whole doctrine is best illustrated by the practical conclusions drawn from it. We have been told that specific remedies either have no influence at all upon parasyphilitic affections or, if they have, "they act very slowly; in fact, their therapeutic action is *always incomplete and insufficient*." This was in fact, one of the characteristics upon which the whole distinction was founded. Yet we are told in the end that experience is above theory and that it teaches us that specific treatment has *very often* cut short, palliated, and corrected, and even absolutely cured, certain syphilitic dystrophies, and in corroboration of this statement several cases are given in which the effect of specific treatment was not only *sufficient* but *complete*. I may be allowed to say that in this case it seems not to be the superiority of experience in general over theory in general, but the inferiority of this particular theory of parasyphilis which has to be held responsible for the contradictions to which it leads. If a theory is found to be diametrically opposed to practice the blame cannot be thrown on theory as an abstract while the theorist makes his escape. The theory of parasyphilis is bound to lead to direct opposition with facts, because the premisses upon which it is reared are fallacious and because it is based on a wrong notion of specificity.

Of course, it is out of the question to give general rules for the line of conduct to be followed with regard to treatment. A dental erosion, rickets, nævus, hydrocephalus, strabismus, tabes, hæmophilia, a predisposition to tuberculosis, &c.—all declared to be parasyphilitic conditions—will give different therapeutic indications. It therefore seems to me the crown-stone to the whole edifice of parasyphilis when Dr. E. Fournier gives general therapeutic rules—supposed to be binding, no matter what particular affection may be present in any individual case. As an example I give here the third of these therapeutic indications: "When a child is born where there is a previous history of syphilis in the parents, and who presents this or that stigma, the only thing to do is to place the parents under a prolonged anti-syphilitic treatment." When the parents are syphilitic mercurial treatment is certainly indicated "with the object of exercising a permanent influence on subsequent pregnancies." But it would seem exaggerated prudence to put both healthy parents on prolonged mercurial treatment merely because a child has bad teeth, or strabismus, or a nævus. On the other hand, meningitis or tabes may, perhaps, justify such a course. But in an *omnium gatherum* like parasyphilis it can never be a question of "this or that"—every fact has to be examined separately and to be treated according to its own merit. In like manner the question of treatment for the parasyphilitic himself will have to be answered according to the particular form of his parasyphilis. A case of parasyphilitic giantism, for instance, may without the least scruple be put on mercurial treatment with the object of reducing his size, likewise the corrective effect of the drug may be tried in cases of moral perversions of heredo-syphilitic origin, while in such parasyphilitic affections as congenital amputation, imperforate anus, double or triple tongue, &c., specific treatment will be of no avail.

The idea underlying the doctrine of parasyphilis is not new. Any specific disease may, and often does, lead to sequelæ void of all specificity in the same way as, to use Mr. Hutchinson's happy parallel, war may, and often does, lead to famine. Under different names, such as quaternary syphilis, pseudo-syphilis, post-syphilis, &c., exactly the same idea has at different times made its appearance in the history of syphilography. What is particularly new in the modern teaching of parasyphilis is, apart from the name, the enormous extension given to the deleterious and deteriorating influence of syphilis upon the race. With regard to this point I wish to give unmistakeable expression to my firm conviction that the modern doctrine of heredo-parasyphilis contains "one inch of discovery" to a "South Sea" of "invention."

A STATISTICAL INQUIRY INTO THE PROGNOSIS AND CURABILITY OF EPILEPSY; BASED UPON THE RESULTS OF TREATMENT.[1]

BY WILLIAM ALDREN TURNER, M.D. EDIN., F.R.C.P. LOND.,

PHYSICIAN TO OUT-PATIENTS, THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, QUEEN-SQUARE, AND TO KING'S COLLEGE HOSPITAL.

Introduction.—Much attention has been given from classical times onwards to the prognosis of epilepsy. It would, however, serve no useful purpose to refer to the numerous authorities on this disease, or even briefly to state their conclusions. An exception ought, however, to be made in the case of Hippocrates, in whose writings will be found much that is of value even at the present time. For example, when describing the "Sacred Disease" he wrote:[2] "If it attacks little children the greater number die. ..... If youths and young adults, recovery may take place, but there is danger of its becoming habitual, and even increasing if not treated by suitable remedies. Such also is the case when it attacks children. ..... When it attacks people of advanced years it often proves fatal. ..... When a person has passed the twentieth year of his life the disease is not apt to seize him, unless it has become habitual from childhood. ..... When the disease has prevailed for a length of time it is no longer curable." It would appear, however, as if the ancient Greek and Roman physicians took a more generally favourable view of the disease than has been the custom in more recent times. The essentially gloomy view of the prognosis which has attended the study and treatment of the malady up to the present time may be largely ascribed to the writings of the French physicians in the earlier decades of the last century. Gloomy indeed is the general impression obtained from the writings of Maisonneuve (1803), Pinel (1818), Esquirol (1838), Valleix (1851), and others. More cheerful are the results recorded by such writers as Herpin (1852) and Trousseau (1861) in France and Russell Reynolds (1861) in this country, who corroborate the opinion expressed by one of the earliest of the French authors, Tissot (1778–80), who almost alone in the eighteenth century stated that he had cured a great number of epileptics and believed that much could be done towards the arrest of the malady.

A few statistics on the subject may be given here with a view of showing the variability existing between the results obtained by treatment at different periods. In the pre-bromide days it is interesting to recall the high percentage of so-called cures which have been recorded; thus Hufeland[3] stated that a cure was effected in 5 per cent. of his cases. Russell Reynolds[4] noted that 10 per cent.

[1] A paper read before the Royal Medical and Chirurgical Society on June 9th, 1903.

[2] Sydenham Society's translation, vol. ii., pp. 350 et seq.

[3] Hufeland: Manuel de Medecine, 1841.

[4] Russell Reynolds: Epilepsy, 1861.

of his cases were cured; Trousseau obtained 20 cures out of 150 cases, or 13 per cent.; and Herpin[5] was perhaps justified in his sanguine belief when he recorded 19 cures out of 38 cases, or 50 per cent. These are the results recorded by physicians who used remedies (such as oxide of zinc and nitrate of silver) which have long ago passed out of present-day practice. The almost universal administration of bromides, since their introduction in 1857 in the treatment of this disease, has in no way affected the variability in the results obtained. To mention a few instances: Nothnagel gives from 4 to 5 per cent. of cures, Laehr gives 6 per cent., Ackermann gives 7·6 per cent., Dana[6] gives from 5 to 10 per cent., Wildermuth gives 8·5 per cent., Habermaas[7] gives 10·3 per cent., and Alt gives 12·5 per cent. It must be evident that some explanation ought to be forthcoming as to the difference existing between the statistics of recent authors upon the results obtained before and since the introduction of the bromide treatment. First, some proportion of the existing difference is accounted for by the greater precision exercised in diagnosis, the later authors excluding all cases from their statistics of symptomatic epilepsy, or epilepsy arising from organic cerebral or meningeal disease, and of hystero-epilepsy. It is within the knowledge of most neurologists that the prognosis of symptomatic epilepsy is more favourable than that of true epilepsy, but an obvious proof of this fact may be found on perusal of Reynolds's[8] figures, which show 10 per cent. of cures in the idiopathic disease and 43 per cent. in that due to organic cerebral disorders. Secondly, much of the discrepancy existing in statistics depends upon the definition of a cure, the interpretation differing widely in nearly every writer's statements. Reynolds regarded only those cases as cured in which there had been perfect restoration to health during a period of at least four, or at most eight, years after cessation of the seizures; but many authors fail to state in their writings what is their definition of cure or recovery from epilepsy, and in the majority of instances so-called cures are merely long remissions occurring spontaneously or induced by suitable medicinal remedies. It would seem to be obvious from Voison's statement that Herpin's were really cases of permanent cure, for he observed many of these patients 10 years after Herpin's death and found them free from fits."

The statistics.—It has been thought advisable that the records of the out-patient department of the National Hospital for the Paralysed and Epileptic, which contain an enormous amount of valuable information in this connexion, might be advantageously studied with a view to collecting and analysing the experience of many years in the treatment of this disease under the influence of the bromides and the more recent medicinal remedies. I am therefore greatly indebted to my colleagues in the out-patient department of the hospital for permission to refer to their case records and to add them to those which have been under my own observation. A few cases have also been obtained from private sources. I have reserved for special consideration in a further communication the cases which have come under care and treatment at the Colony for Epileptics, Chalfont St. Peter, amounting to about 200 in number. The reason for this separation is obvious, in that those cases which eventually find their way into this and similar institutions have previously to their admission been under various forms of medicinal treatment, from which they have received no permanent benefit, and have become in the majority of instances confirmed epileptics. The hospital cases, on the other hand, are mainly early examples of the disease, with little or no mental impairment, and are perfectly capable of continuing their schooling or attending to their several occupations.

In analysing the cases certain guiding principles were laid down and the following eliminations were made: (1) all cases which had not been under constant observation and treatment for a period of at least two years; (2) all cases which showed any co-existing complication, such as hemiplegia, albuminuria, or gross cerebral lesion; and (3) all cases of pronounced idiocy or dementia. By observing these restrictions cases of so-called idiopathic epilepsy were as far as possible obtained, while any transitory amelioration resulting from medicinal or other treatment was checked by fixing the minimum period of observation at two years. In the study of the cases the statistical method has been adopted and the results have been recorded in percentages, the total number of cases used in the construction of each table being also given. Although many objections may be urged against such a method it has been deemed to be the best available, while the results, as will be seen later, show a surprising uniformity when considered from various points of view. The total number of cases used in the investigation is 366. Of these 355 are from the records of the out-patient department of the Hospital for the Paralysed and Epileptic, while only 11 are from private sources. By far the larger proportion are out-patient hospital cases, a fact of practical importance when we consider how large a part the ordinary conditions of life, such as diet, habits, and general environment, play in modifying a disease like epilepsy. The cases have been subdivided into three groups according as they have responded, successfully or unsuccessfully, to treatment.

TABLE I., *giving the Total Number of Cases and the General Result of Treatment.*

Cases of arrest	86	Observed over nine years ...	38
Cases showing improvement	105	,, ,, ...	43
Confirmed cases	175	,, ,, ...	66
Total	366	Total	147

The term *arrest* has been used at the outset advisedly in preference to *cure*, owing to the uncertainty in defining the latter term. No case has been regarded as arrested which has not been free from fits for a period of at least two years. The cases classified as *improved* are those which have responded, more or less satisfactorily, to treatment. Under this heading are also included those cases in which a remission, sometimes for a number of years, has occurred, but in which a relapse has eventually taken place. *Confirmed* cases are those which have shown a steady tendency, though not necessarily a progressive one, to mental deterioration, without any material lessening either in the frequency or the severity of the seizures. In the second column of the table is given the number of cases which were observed for a period of nine years or more. The importance of this column will be seen in a subsequent part of the paper. Of the total of 366 cases no less than 86 showed an arrest of the seizures over periods varying from two and a half to 25 years. The majority of these continued the bromide treatment during the whole period of arrest, so that, with few exceptions, the amelioration cannot be described as other than arrest during the administration of the bromides. In all cases, owing to the patient passing from under observation after a number of years, no further record has been obtainable. It is, however, no uncommon thing to meet with a past history of this disease in adults and elderly people suffering from symptoms of nervous debility and neurasthenia, who give an account of having many years before been subject to attacks of an epileptic nature and of which they have been cured. Two instances of this may be given.

CASE 1.—A man, when 18 years of age, had an epileptic fit. This was followed by two more attacks during the next 18 months. He was kept upon bromide treatment for four years and as there was no recurrence of the fits the medicine was stopped. 15 years later, when aged 35 years, he came under treatment for general neurasthenic symptoms, having had no relapse of the epileptic attacks.

CASE 2.—An unmarried woman had a number of epileptic fits between the ages of 28 and 32 years. She was under treatment by bromides for one year only. 22 years later, when 54 years of age, she came under observation for headache and nervousness, having had no further attacks of epilepsy since she was 32 years of age. During this period she had no treatment of any kind.

The subjoined table (Table II.) gives the total number of cases in which arrest took place and the length of time during which no fits were noticed, the bromides being all the while administered, except where stated to the contrary.

As it is highly desirable to ascertain how far epilepsy is a disease which may be arrested, improved, or become confirmed, it is proposed to study the cases which have been collected and the influence of treatment upon them under various headings, so as to define, as far as possible, the specific factors upon which a prognosis may be based. The method adopted in this paper is one of percentages, the

[5] Herpin: Du Pronostic, &c., 1852.
[6] Dana: Text-book, 1898.
[7] Habermaas: Allgemeine Zeitschrift für Psychiatrie, vol. lviii., p. 243, from which the other references are taken.
[8] Russell Reynolds: Epilepsy, London, 1861.
[9] Mentioned by Nothnagel, Ziemssen's Encyclopädie, vol. xiv., 1878.

TABLE II., *giving the Number of Cases in which Arrest took place and their Duration.*

11	cases of arrest of from			2	to	3	years' duration.	
18	,,	,,	,,	3	,,	4	,,	,,
10	,,	,,	,,	4	,,	5	,,	,,
11	,,	,,	,,	5	,,	6	,,	,,
5	,,	,,	,,	6	,,	7	,,	,,
8	,,	,,	,,	7	,,	8	,,	,,
8	,,	,,	,,	8	,,	9	,,	,,
4	,,	,,	,,	9	,,	10	,,	,,
5	,,	,,	,,	10	,,	11	,,	,,
2	,,	,,		11			,,	,,
*2	,,	,,		15			,,	,,
*1	,,	,,		22			,,	,,
1	,,	,,		25			,,	,,
86								

* Without bromides.

total number of cases in the several tables showing slight variations, according as the information supplied by the notes threw light upon the points specially under investigation. The prognostic bearing and value of the following influences will therefore receive separate consideration.

Conditions influencing prognosis.—The prognosis of epilepsy and the conditions which influence it will be discussed in detail. It is proposed to deal with this subject under the following headings: (1) the influence of a hereditary disposition; (2) the influence of age at the onset of the disease; (3) the duration of the disease; (4) the frequency of the seizures; (5) the character and time of the seizures; (6) the influence of marriage; (7) the influence of pregnancy, parturition, and the puerperium; (8) the influence of sex; (9) the influence of the catamenia; and (10) the influence of accidental factors. After the above have received consideration on the basis of the collected cases, attention will be directed to certain types of epilepsy which have an influence on the prognosis, and also to the important subject of long remissions in epilepsy and their bearing upon the cure of the disease.

1. *The influence of a hereditary disposition.*—For the purposes of this investigation a family predisposition to epilepsy only—i.e., a similar heredity—has been noted. The influence of the neuroses, such as chorea, migraine, alcoholism, and insanity, has been for the present purpose omitted from the statistics.

TABLE III., *giving the Total Number of Cases in which this point was investigated.*

—	Arrests.	Improved.	Confirmed.	Total.
Epilepsy on mother's side	16	16	18	50
Epilepsy on father's side	12	11	14	37
No known heredity to epilepsy	42	59	24	125
No note of heredity	12	19	119	150
Total	—	—	—	362

In Table III. a total of 362 cases has been analysed; of these 150 may be eliminated, as there was no note either for or against any hereditary predisposition. Of the remainder there was a clear family history of epilepsy in 87, while the existence of this disease in the family was unknown to the patient or the relatives in 125. The malady was slightly more common upon the mother's than upon the father's side.

TABLE IV., *giving the Percentage of Hereditary and Non-hereditary Cases.*

—	Arrests. Per cent.	Improved. Per cent.	Confirmed. Per cent.	Total cases.
With hereditary history	32·0	31·0	36·0	87
Without hereditary history	33·6	47·2	19·2	125
Total	—	—	—	212

From Table IV. it is seen that there is practically the same percentage of arrests in those with as in those without a hereditary history, the latter, moreover, showing a greater percentage of improved cases and a decidedly smaller percentage of cases which eventually became confirmed.

The general prognostic conclusions which may be drawn from these cases are: (*a*) That there is as great a chance of arrest of epileptic fits in those who have as in those who have not a known family history of epilepsy. (*b*) In those who have a hereditary history the chances as to whether the fits become arrested, improved, or confirmed are in any given case about equal. (*c*) That as regards general improvement more is to be expected in those who have no hereditary disposition. (*d*) On the other hand, a considerably smaller percentage of confirmed epileptics is to be found amongst those who have no family predisposition to the disease.

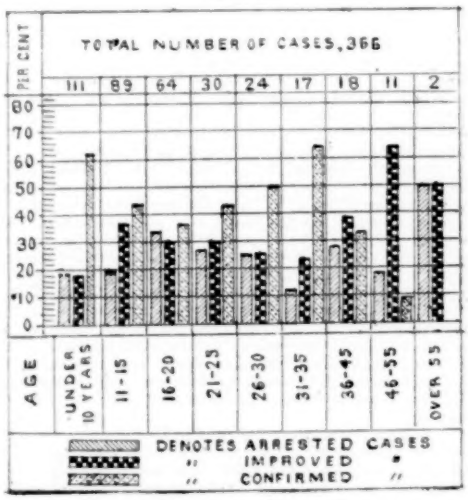
2. *The influence of age at the onset of the disease.*—In the subjoined table the percentages are given in the middle columns, the total numbers being stated in the last.

TABLE V., *showing the Age Percentage at the Onset of the Fits.*

Age at onset.	Arrests. Per cent.	Improved. Per cent.	Confirmed. Per cent.	Total cases.
Under 10 years ...	19·8	18·0	62·0	111
11 to 15 ,, ...	20·0	35·9	43·8	89
16 ,, 20 ,, ...	34·3	29·6	35·9	64
21 ,, 25 ,, ...	26·6	30·0	43·0	30
26 ,, 30 ,, ...	25·0	25·0	50·0	24
31 ,, 35 ,, ...	11·7	23·5	64·7	17
36 ,, 45 ,, ...	27·7	38·8	33·3	18
46 ,, 55 ,, ...	18·1	63·6	9·0	11
Over 55 ,, ...	50·0	50·0	—	2
Total	—	—	—	366

The accompanying chart (Chart 1) is of especial value as it shows that the age at the onset of the disease is particularly important in considering the prognosis. In order to facilitate the comprehension of the figures in Table V. the following graphic method has been adopted.

CHART 1.



Showing influence of age at onset.

The main conclusions to be derived from a perusal of the above may be stated as follows: (*a*) Epilepsy commencing under ten years of age is least favourable as regards arrest or improvement and most favourable for the production of confirmed cases. (*b*) Those cases in which the onset of the disease is between 16 and 20 years of age show the greatest percentage of arrests and the lowest percentage of confirmed cases. From this quinquennial period onwards to that of 31

to 35 there is a steady diminution in the percentage of arrests and a progressive increase in the percentage of confirmed cases. The chief point of practical importance to be deduced from these figures, if put in general terms, is that epilepsy arising during puberty is essentially a tractable disorder, while that of adolescence is resistance to treatment. These facts and figures confirm in a striking manner the opinion of Hippocrates who wrote: "Epilepsy which commences about puberty is susceptible to cure, while that which comes on after 25 years of age as a rule only terminates with the patient."[10] (*c*) From that arising during the quinquennial period from 31 to 35 years (which provides the least tractable form of epilepsy, except perhaps that commencing under 10 years of age) there is a steady diminution in the number of cases which become confirmed, so much so that of those cases which arose during the decennial period from 46 to 55 years only 9 per cent. became confirmed epileptics. (*d*) Epilepsy arising over 55 years of age, to which the name of senile epilepsy has been applied by some writers, is essentially a tractable disorder.

3. *The influence of the duration of the disease.*—In the two following tables the duration of the malady is considered, the percentage frequency being given in the middle columns and the total number of cases in the last. The term "duration" signifies the course of the disease from its commencement until the patient came under regular observation and treatment at the hospital, from which time there dated either arrest of the fits, improvement, or a steady downward deterioration.

TABLE VI., *giving the Duration Percentage of the Disease up to the Commencement of Treatment and the General Result of Treatment.*

Duration.	Arrests. Per cent.	Improved. Per cent.	Confirmed. Per cent.	Total cases.
10 years and under	23·5	32·3	41·1	272
11 to 20 years	25·8	19·3	54·8	62
21 ,, 30 ,, ...	12·5	20·8	66·6	24
31 ,, 40 ,, ...	20·0	—	80·0	5
Over 40 ,, ...	50·0	—	50·0	2
Total	—	—	—	365

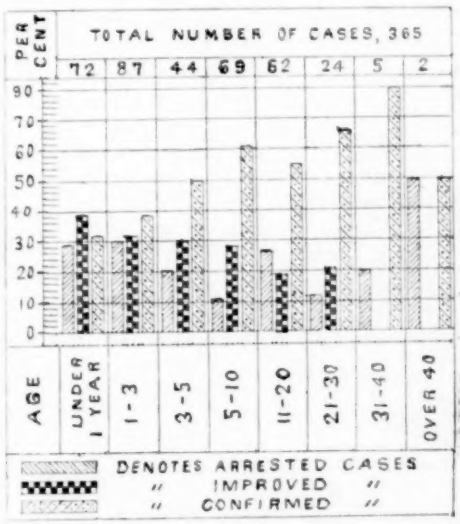
Table VI. shows, by division into decennial periods, that there is as great a percentage of arrests when the disease has lasted from 11 to 20 years as from one to 10 years, but that under 10 years the percentage of improved cases is greater and there is less tendency for the disease to become confirmed. But as 10 years is a considerably prolonged period, and as the majority of epileptics come under observation and treatment before so long a time has elapsed, it is important to ascertain the percentage frequency for periods short of 10 years, and this has been done in Table VII.:—

TABLE VII., *giving the Percentage Frequency in Four Unequal Periods under 10 Years of Age.*

Duration.	Arrests. Per cent.	Improved. Per cent.	Confirmed. Per cent.	Total cases.
Under 1 year	29·1	38·8	31·9	72
1 to 3 years	29·8	32·1	39·0	87
3 ,, 5 ,, ...	20·4	29·5	50·0	44
5 ,, 10 ,, ...	11·5	27·8	60·8	69
Total	—	—	—	272

Some general conclusions may be drawn from a perusal of the tables, as well as from a study of the subjoined chart (Chart 2), which gives in a graphic form the percentage results already detailed. (*a*) Speaking in general terms the earlier a case is brought under systematic treatment the more hopeful the prognosis and the greater the probability of improvement. (*b*) That there is a greater prospect of arrest or improvement during the first five than during the second five years of the disease. (*c*) Arrest of the fits, however,

CHART 2.



Showing duration percentage.

may take place in cases even after a duration of from 20 to 30 years. After 30 years arrest is possible, but the fewness of the cases hardly allows of any definite conclusions. (*d*) There is a progressive tendency for epilepsy to become confirmed the longer the disease lasts without definite treatment.

A comparison may now usefully be made between Tables V. and VII., which show respectively the age and duration percentages, and the following table (Table VIII.), which shows the age periods at which arrest most commonly took place.

TABLE VIII., *showing the Age Periods at which Arrest took place in 86 Cases.*

Under 10 years of age	6 cases, or	6·9	per cent.
From 11 to 15 years of age	8 ,,	9·2	,,
,, 16 ,, 20 ,, ,, ...	15 ,,	17·4	,,
,, 21 ,, 25 ,, ,, ...	17 ,,	19·7	,,
,, 26 ,, 30 ,, ,, ...	9 ,,	10·4	,,
,, 31 ,, 35 ,, ,, ...	8 ,,	9·2	,,
,, 36 ,, 40 ,, ,, ...	7 ,,	8·0	,,
,, 41 ,, 45 ,, ,, ...	7 ,,	8·0	,,
,, 46 ,, 50 ,, ,, ...	4 ,,	4·6	,,
Over 50 years	4 ,,	4·6	,,
A doubtful case	1		
Total	86		

From these tables it is obvious that the decade 16 to 25 presents the greatest number of arrests; in other words, more arrests are likely to take place during the latter part of that decade, in the earlier part of which the onset of true epilepsy is most common—that is to say, the quinquennial period 16 to 20, in which the disease most usually declares itself, is succeeded by the quinquennial period 21 to 25, in which arrest is most frequent. This observation would corroborate the interpretation put upon the figures given in Tables VI. and VII., from which it is clear that epileptic fits are more prone to arrest during the first three or five years following their onset.

4. *The frequency of the seizures.*—The relative or average frequency of the attacks has an important bearing upon the prognostic outlook, as will be readily seen from Table IX.

The general conclusion may be drawn that the longer the interval between the attacks the greater the prospect of arrest or improvement. Very infrequent attacks are eminently favourable. Attacks which occur every three or four months, or once or twice a year, are—within certain

[10] Aphorisms, Section 5, No. vii. The aphorism is rendered in the Sydenham Society's translation, vol. ii., p. 738, as follows: "Those cases of epilepsy which come on before puberty may undergo a change, but those which come on after 25 years of age for the most part terminate in death."

TABLE IX., *giving the Percentage Frequency of the Attacks.*

Frequency.	Arrests. Per cent.	Improved. Per cent.	Confirmed. Per cent.	Total cases.
Daily (1 or more) ...	—	42·5	57·5	40
Weekly (1 or 2) ...	12·5	23·9	63·5	96
Monthly (1 or 2) ...	22·9	31·2	45·8	96
Quarterly (1 or 2) ...	36·9	24·3	38·4	65
Yearly (1 or 2)... ...	42·1	47·3	10·5	19
Total	—	—	—	316

limits and when considered in association with the points already mentioned in previous paragraphs—of more satisfactory prognostic importance than those which may be counted by the month, the week, or the day. The greatest percentage of confirmed cases and the smallest percentage of arrested cases are seen from the above table to occur in those epileptics who are subject to daily and weekly attacks, and the converse also holds good in that the smallest percentage of confirmed and the highest of arrested cases are found amongst those epileptics whose fits occur so infrequently as once or twice a year.

5. *The character and time of the seizures.*—The kind of attack to some extent modifies the prognosis. It is a matter of common knowledge that the major attacks are more readily influenced by drugs than the minor seizures. Owing to the incompleteness of the notes in describing the exact character of the fits it has been found impossible to construct a table of any real value, but so far as information has been supplied it is clear that the greatest percentage of arrests is to be found in cases of grand mal (49 per cent. out of a total of 96 cases); then follow the cases of combined grand and petit mal (35 per cent. out of a total of 56 cases); and lastly, petit mal occurring alone (26 per cent. out of a total of 15 cases). So also with regard to the time-incidence of the seizures. Those occurring by day only—including in this the very common early morning seizure—give a greater percentage of arrests (51·9 per cent. out of a total of 52 cases) than those occurring only during sleep (34 per cent. out of a total of 35 cases). Combined day and night attacks give also an arrest percentage of 34 per cent. out of a total of 35 cases.

6. *The influence of marriage.*—There would appear to be no real foundation for the popular belief that marriage predisposes towards cure, or even amelioration, of epileptic seizures. On the contrary, the consequences of matrimony tend to the production of circumstances distinctly unfavourable to the arrest or alleviation of the disease. Of 13 cases in which the disease was specially observed in its relation to marriage (all being women), five stated that they observed no change at all either in the frequency or the character of their fits; five appear to have slightly improved, in one of whom the improvement was only temporary; of the remaining three, one had her first seizure on the night of her marriage, another developed epilepsy seven months after marriage, while the third case seems to have been distinctly affected for the worse by marriage. These observations are in general harmony with what has been stated by other writers—namely, that there is no constancy in the influence of marriage upon the seizures.[11] The influence of marriage upon the transmission of the disease is a subject which scarcely comes within the scope of this paper, but some facts bearing upon it are incidentally mentioned and will be here briefly stated.

CASE 3.—A married woman, suffering from epilepsy, whose maternal grandfather had fits, bore six children, all of whom died from convulsions in infancy.

CASE 4.—Two epileptics, husband and wife, had six children. Three daughters and a son were well and without fits. Two other daughters, aged 16 and 18 years, developed fits when they were respectively 13 and 14 years old.

CASE 5.—A married epileptic woman, without any known heredity to the disease, had ten children, the eldest of whom was 37 and the youngest 20 years old. None of them had convulsions or fits.

CASE 6.—A married epileptic woman, whose two brothers also had fits, had a daughter who was also an epileptic.

[11] On this point see some statistics collected by A. Hughes Bennett, Brit. Med. Jour., March, 1879.

CASE 7.—An epileptic man, without any known heredity, had ten children, the youngest of whom was 36 years of age. None of them had fits.

CASE 8.—An epileptic man without heredity, who had fits from 16 to 69 years of age, had two children, neither of whom had fits.

CASE 9.—A married epileptic woman had two children without fits, but both of them had an attack of chorea.

The above form only a small number of cases, but one fact stands out—namely, that of the three parents in whose family there was no known history of epilepsy, epileptic fits had not appeared in the children; that in the two cases in which the disease was obviously hereditary fits or convulsions were present in the offspring; and that in the case in which both parents were epileptic two out of six children developed epilepsy.

7. *The influence of pregnancy, parturition, and the puerperium.*—The influence of pregnancy has been noted in 20 cases. Of these, nine were free from seizures during this period, one patient stating that her longest free intervals occurred when she was in this condition. Of the remainder, seven were invariably worse when pregnant, two had fits only at or about the time of quickening, and one never observed any difference either in the frequency or character of the fits. In another case, in which the fits were arrested by bromides for a long time, an intercurrent pregnancy and subsequent puerperium intervened without any symptoms of epileptic seizures. It may therefore be concluded that gestation has little, if any, influence upon the disease. At the best there may only be a temporary respite; but pregnancy is the forerunner of the *puerperium*, a period which is especially prone to epileptic attacks. Of 19 cases in which this state was noted all gave a history of one or more severe attacks within a short period, usually a few days after the birth of the child. In two of the cases the onset of the disease was observed after the birth of the first baby and in one after the birth of the fourth child. *Lactation* would seem in some cases to be peculiarly favourable for the occurrence of fits. In one case the fits only came on during the period of suckling and this happened after three successive pregnancies. On weaning the fits disappeared. In a second case the first fit arose while nursing the first baby four months after confinement. From the above facts it would appear as if there were three periods when epileptic fits were prone to develop—at quickening, during the first few days of the puerperium, and during lactation.

8. *The influence of sex.*—Sex plays little part in the prognosis of epilepsy. The following table (Table X.) will show the percentage of arrested, improved, and confirmed cases in this relation. From this it is seen that rather more males show arrest of the seizures, but at the same time this sex gives a greater percentage of confirmed cases.

TABLE X., *showing the Sex Percentage of Arrested, Improved, and Confirmed Cases.*

	Arrests. Per cent.	Improved Per cent.	Confirmed. Per cent.	Total cases.
Males...	26	22	51	179
Females	20	34	44	187
Total	—	—	—	366

These results are in harmony with those of several previous observers (Reynolds, Gowers, and others), but are in opposition to the statement of Herpin.

9. *The influence of the catamenia.*—Menstruation would appear to exert little influence upon the prognosis of epilepsy. The popular belief that the satisfactory and regular establishment of this function will arrest or ameliorate the disease has no scientific basis. The onset of epileptic fits during puberty is not uncommonly accompanied by irregularity in the menstrual periods, but it is rare to find any amelioration in the frequency or severity of the attacks when the period becomes regularly established. It will be seen that amenorrhœa induced physiologically by pregnancy may or may not have any beneficial effect. There were some cases also in which the fits became arrested at or about the climacteric period, but the evidence is too small to state definitely that this is an epoch at

which spontaneous arrest may be expected. A reference to Table VIII. will show that 8 per cent. of the cases were arrested between the ages of 41 and 45 years, but only three of these were women. There was one patient, however, who seemed to lose her fits when she was subject to amenorrhœa, from which she occasionally suffered for prolonged periods. During these periods she was invariably free from attacks, which reappeared when the catamenia were established.

10. *The influence of accidental factors.*—A few words may be said upon the influence of accidental factors in relation to the production of epileptic fits. In two cases an intercurrent attack of pneumonia was noted. In one, although several seizures occurred during the course of the pulmonary inflammation, a respite from fits was subsequently obtained lasting for several months. In another, during a long spell of freedom from fits an attack of pneumonia brought about a temporary return of the seizures. In another patient an attack of chorea was followed by a year's freedom from fits. In another an attack of scarlet fever greatly increased the number and severity of the epileptic seizures. In another case a long interval of freedom was broken by the patient receiving a severe blow upon the head. In a case of epilepsy the gradual onset of paralysis agitans made no difference to the pre-existing disease. As a rule an attack of acute febrile disorder gives a subsequent temporary respite from fits, with the exception of scarlet fever, a fact which has also been noted by Gowers. On the other hand, the *onset* of an acute pneumonia may be accompanied by severe seizures or by a temporary relapse during a remission from fits. Injuries, such as blows upon the head, aggravate the disease, an observation which is in harmony with what occurs in other chronic nervous disorders. No prolonged relief from epileptic fits can therefore be predicted after the occurrence of an acute inflammatory disorder.

Types of epilepsy.—Even a brief acquaintance with epileptics will show that there is a marked periodicity in the occurrence of the seizures, which is highly characteristic of the disease. The intervals are of varying duration—a day, a week, two weeks, a month, two or three months, a year, or longer. These intervals are, however, not absolutely regular, considerable variability and irregularity being observed on charts specially kept for recording the time periodicity of epileptic fits. Such, indeed, is the common incidence of attacks; but attention has been directed by Biro[12] to certain types of cases which have apparently some bearing on prognosis. These types have been called "increasing" or "decreasing," and some examples will be given to illustrate their characteristics. The types may be described either by the number of fits per month or per year, in increasing or decreasing numbers, or by the number of years or months intervening between the seizures. The following cases may be taken as illustrative of the types. Cases 10, 11, and 12 are of the increasing type; Cases 13, 14, and 15 are of the decreasing type; and Cases 16 and 17 are blended increasing and decreasing types.

CASE 10.—In this patient fits commenced at 15 years of age. Three fits occurred in the first year (without treatment); four in the second year (under bromides); nine in the third year (under bromides); and ten in the fourth year (under bromides). After this the patient ceased attending. It is seen that the fits went on increasing, notwithstanding the continuance of treatment.

CASE 11.—This patient had the first fit when five years of age, the second when 11, the third when 19, the fourth when 20, and the fifth and sixth when 21. He was then put under bromide treatment and has had no fits for eight years.

CASE 12.—In this patient fits commenced at 22 years of age. Previously to regular bromide treatment she was having about one fit per month. Under bromides she had one fit in December, 1897; interval of two years; two fits in January, 1900; interval of one year; two fits in 1901; three fits in 1902; since which date there has been no further observation.

CASE 13.—In this patient fits commenced at 39 years of age. During the first year of bromide treatment the patient had several attacks; the second year, four; the third year, one; the fourth year, two; the fifth year, one attack; and the sixth, seventh, eighth, and ninth years, none.

CASE 14.—In this patient fits commenced at 21 years of age. During the first year of treatment the patient had 12 or more fits; the second year, 12; the third year, 12; the fourth year, three; the fifth year, four; the sixth year, two; and the seventh, eighth, and ninth years, none.

CASE 15.—This patient came under treatment at 19 years of age, having a fit every two or three weeks. During the first year of treatment he had about 12 fits; the second year, several; the third year, eight; the fourth year, four; the fifth year, one fit; and the sixth year, none.

The two types, as above described, may, upon the other hand, be found blended in the same case; for example, one of increasing character may as the result of treatment be changed into the decreasing type and of this description are the two following cases.

CASE 16.—In this patient the first fit occurred at 12 years of age, the second after eight years' interval, the third after five, the fourth after five, the fifth after two, and a batch of three fits after three. He then came under regular bromide treatment and had two fits in the next year, three in each of the two following years, five in the next year, one fit a year later, and none in the next three years.

CASE 17.—When aged 25 years, in 1882, this patient had his first fit, in 1884 his second, from 1884 to 1887 he was free from attacks, from 1887 to 1890 he had several, in 1891 four, in 1892 11, in 1893–94 eight, in 1895 six, in 1896 three, in 1897–98 none, in 1899 one very slight, and in 1900–01 none.

The above-recorded cases, although symbolic of the types referred to, are rarely met in such purity. Their prognostic importance may be briefly stated as follows: (1) In the increasing type, as shown in Cases 10 and 12, the fits through a natural inclination to self-perpetuation go on increasing in spite of treatment. On the other hand, the type may be not unfavourable for arrest, as in Case 11. (2) The decreasing type is more commonly induced by treatment and if clearly established has a favourable outlook.

Long remissions in epilepsy.—It is well known that remissions are a frequent, if not a characteristic, feature of this disease. The common remission which takes place during childhood in those patients whose fits commence in infancy, then cease for a time and recur at or about the time of puberty, is one of the most remarkable features of this disorder. An interval of several years not infrequently occurs between the first and second attacks, while numerous instances may be cited in which periods of five, ten, or 15 years have been known to elapse between epileptic seizures. Wharton Sinkler[13] records a remission of 29 years in one of his cases. An examination of the present series reveals a number of instances in which remissions have been observed and which have persisted for a number of years, but which have been succeeded by a return of the characteristic seizures. In the cases in which *arrest* is stated to have occurred, freedom from fits was noted over periods varying from two to 25 years (these have not been included in the present table), but in Table XI. will be found the list of cases which show *remissions* lasting for more than two years, with subsequent relapse.

TABLE XI., *showing the Cases of Remission and their Duration.*

Remission of from	2	to	3	years observed in	1 case.
,,	,,		3 ,, 4	,, ,,	2 cases.
,,	,,		4 ,, 5	,, ,,	4 ,,
,,	,,		5 ,, 6	,, ,,	2 ,,
,,	,,		6 ,, 7	,, ,,	2 ,,
,,	,,		7 ,, 8	,, ,,	1 case.
,,	,,		15	,, ,,	1 ,,

In these cases the remission occurred during the administration of bromide and in all of them the fits returned, notwithstanding the continuance of the drug.

As it is from the consideration of such cases that most information may be gleaned with reference to the possibility of a cure of epilepsy it will be instructive to study some of them with greater detail. In one case there were two periods of remission, one lasting for three and a half years without any remedies having been given and the other for four years under bromide treatment. The fits eventually recurred with symptoms of automatism and violence. In another an interval of six years of freedom was succeeded by a return of fits in increasing frequency. In a third there were two remissions, one of three years and a second of five years, to be followed by fits occurring

[12] Biro: Deutsche Zeitschrift für Nervenheilkunde, vol. xxiii., p. 40.

[13] Wharton Sinkler: Journal of Nervous and Mental Disease, 1898, p. 601.

about every month. In another an apparent arrest for seven years was broken by two fits during an attack of acute pneumonia. In the patient remission of whose seizures lasted for 15 years the relapse was characterised by the occurrence of petit mal. It should be pointed out that in all the above cases the disease had been fully established for some years and that the intervals therefore do not correspond to the prolonged periods sometimes found between the first and second fits to which reference has already been made. Two points especially call for notice in this connexion: on the one hand, long remissions may occur under the administration of bromides to be followed by a relapse when the drug is omitted; and on the other hand, a remission of long duration may be broken by accidental circumstances, such as a blow on the head, a fall, childbirth, or an acute inflammatory disorder. Hence it is apparent that long periods of arrest, though as a rule indicating a favourable prognosis, are not synonymous with a cure of the disease. The question may therefore now be asked—

Is there a cure of epilepsy?—This question may in general terms be answered in the affirmative. Two cases (Cases 1 and 2) have been already mentioned in which this occurred and not a few instances may be gathered from amongst epileptics and neurasthenics who state that they suffered from fits in earlier years, and if the later histories of epileptics could be traced many more instances might no doubt be added. Although writers are generally agreed as to a cure of epilepsy there is a less general consensus of opinion as to what is the definition of a cure—that is to say, after what period of arrest a "cure" may be said to have taken place.[14] Before attempting to answer this question it is necessary to refer again to a few points to which attention has already been directed. With this object in view, Tables II. and XI., dealing especially with the cases of arrest and long remission, are blended and reproduced side by side in Table XII., which gives the number and duration of the cases of arrest and remission:—

TABLE XII., *giving the Cases of Arrest and Remission with the Duration.*

11 cases of arrest, 1 of remission, from 2 to 3 years' duration.									
18	..	..	2	..	..	3	..	4	.. ..
10	..	..	4	..	..	4	..	5	.. ..
11	..	..	2	..	..	5	..	6	.. ..
5	..	..	2	..	..	6	..	7	.. ..
3	..	..	1	..	..	7	..	8	.. ..
8	..	..	0	..	..	8	..	9	.. ..
4	..	..	0	..	..	9	..	10	.. ..
5	..	..	0	..	..	10	..	11	.. ..
2	..	..	0	..	of	11			.. ..
2	..	..	1	..	..	15			.. ..
1 case		..	0	..	..	22			.. ..
1	..	..	0	..	..	25			.. ..
66	Total	...	13						

The arrest column shows that the greater number of the cases (71 out of a total of 86) were observed over a period of from two to nine years during which no fits occurred; while of the cases of remission, although four showed an arrest of from four to five years, in five a relapse occurred up to eight years, after which time only one was found to relapse. When these results are compared in conjunction with those of Wharton Sinkler, who observed only four cases of relapse out of a total of 24 after nine years' remission, I have thought it *unsafe to regard as cured any case of epilepsy in which the seizures have been in abeyance for a period of less than nine years* after the disease has become satisfactorily established. This provision is made in order to eliminate all those cases of remission during childhood which are known to last for seven, eight, or nine years and also those cases in which long intervals elapse between the first and second or second and third fits at the commencement of the disease. In order to obtain the percentage of cures in the present series those cases only have been taken which were under observation for a period of at least nine years. They form a total of 147 of which 15 were arrested for nine or more years (*vide* Table II.), *giving a percentage of 10·2 cures.*[15] Taking the series of cases with long remission recorded in this paper along with those of Sinkler it is found that a few still remain in which relapse occurred after the nine years' limit—viz., four by Sinkler and one by myself. Therefore, although it may be laid down as a general rule that a cure of epilepsy has been established after an arrest of nine years, the fact must be borne in mind that a very small percentage of cases do relapse after that period. While discussing the cure of epilepsy, a point of practical importance which should not be overlooked is that those who have been cured of their seizures not infrequently show various mental peculiarities such as impairment of memory, irritability of temper, headache, and a tendency towards neurasthenic symptoms.

The curable cases of epilepsy.—Although in the present series of cases there is no definite information as to the mental condition of the patients, clinical experience and observation show that many cases of epilepsy may exist for prolonged periods without any material mental impairment. Such cases would appear to belong to what may be termed a curable type of epilepsy. A special investigation has therefore been made into the duration of the disease before regular treatment was established in the 86 cases in which arrest took place. From this it is seen that of 44 cases in which arrest took place during the first year of treatment the disease had been in existence during periods varying from one to 35 years, with an average duration of seven years. This investigation also brought forward a point of great importance—namely, that if any given case of epilepsy is capable of amelioration by treatment a satisfactory response will be shortly apparent, as Table XIII. shows.

TABLE XIII., *showing the Influence of Bromide Treatment upon 86 Cases of Arrested Epilepsy.*

Arrest under	1	year's treatment	...	...	44	cases, or	51·7	per cent.
..	.. 2	..	..	... ...	9	.. or	10·5	..
..	.. 3	..	..	... ...	6	.. or	7·0	..
..	.. 4	..	..	... ...	4	.. or	4·7	..
..	.. 5	..	..	... ...	3	.. or	3·5	..
..	.. 6	..	..	... ...	2	.. or	2·3	..
..	over 6	..	..	(7-22 years)	17	.. or	20·0	..
An uncertain case	...	...	...	... ...	1	case.		
	Total	...	...	...	86			

From Table XIII. it is obvious that over 50 per cent. of the cases in which arrest took place yielded to treatment within the first year of regular bromide administration.

SUMMARY AND CONCLUSIONS.

1. A total of 366 cases, chiefly derived from the out-patient records of the National Hospital for the Paralysed and Epileptic, has been used for the investigation.

2. Only cases of genuine idiopathic epilepsy which had been under constant observation and treatment for a period of at least two years have been taken. All cases of symptomatic epilepsy, or cases otherwise complicated, were as far as possible eliminated.

3. The cases have been divided into three series, according as they have responded, successfully or otherwise, to treatment—arrested, improved, and confirmed cases. The influence of the various conditions modifying prognosis has been mentioned in detail, the results of the observations being stated in percentages.

4. A family history of epilepsy will be found more frequently amongst those who have become confirmed epileptics, but a hereditary history of epilepsy does not necessarily militate against the prospects of arrest or improvement of the disease in any given case.

5. The age at the onset of the disease has an especial bearing upon the prognosis. The most unsatisfactory cases are those in which the disease commences under ten years of age; they show the smallest percentage of recoveries and the largest of confirmed cases. If the disease arises between 15 and 20 years of age an almost equal percentage of arrested and confirmed cases may be expected. The greatest percentage of confirmed cases is found amongst those in whom the disease begins between 25 and 35 years of age, from which time onwards there is a steady increase in the expectations of arrest and diminution in the number which become confirmed.

6. The duration of the malady influences the prognosis to the extent that arrest or improvement is much more likely during the first five than during the second five years. Cases, however, may be arrested even after a duration of from 20 to 30 years.

7. The greatest percentage of confirmed and the lowest percentage of arrested cases occur in those epileptics who

[14] Reynolds defined a cure as perfect restoration to health for at least four years, and at most eight years, after arrest of the fits.

[15] There is a striking harmony between these results and the percentage of cures obtained by Reynolds (10 per cent. with a basis of from four to eight years) and Habermaas (10·3 per cent. with a five to ten years' basis).

are subject to daily or weekly attacks, while conversely the smallest percentages of confirmed and the highest of arrested cases occur in those whose fits are as infrequent as once or twice a year.

8. The character of the seizures influences the prognosis to the extent that the major attacks are the most tractable; then follow combined major and minor seizures; and lastly, the minor attacks occurring alone.

9. Marriage exerts little, if any, influence upon epileptic fits. Some patients are relieved and others are made worse. In the majority of cases the disease remains unaffected.

10. Pregnancy has little influence upon the seizures; at the best there may be only a temporary respite. On the other hand the puerperium would seem to be especially favourable for the recurrence of fits; while lactation also is not without an exciting influence in their production.

11. The common incidence of epileptic fits is an irregular periodicity. There are types, however, which have been described as "increasing" or "decreasing," according as the fits increase or decrease in number in a definite period of time or in which there is a shortening or lengthening of the intervals between the fits. A case of increasing type may by treatment be converted into one of the decreasing variety.

12. Long remissions, induced either by successful treatment or from spontaneous cessation of the fits, sometimes lasting for several years are not unusual in epilepsy; they are of favourable prognostic value but are not synonymous with a cure of the disease.

13. From the collected statistics *a period of remission for at least nine years has been fixed as the basis upon which a cure of epilepsy may be established. With this definition of a cure I regard 1)·2 per cent. of epileptics as curable.*

14. There are some cases of epilepsy which may be regarded as belonging to a curable type of the disease. These present little or no mental impairment, notwithstanding that fits may have existed for a long period. In the cases in which arrest took place cessation of the fits occurred within the first year of continuous treatment in over 50 per cent.

Bibliography.—Hippocrates: Sydenham Society's Translation, vol. ii., pp. 350 et seq. Maisonneuve: Recherches et Observations sur l'Epilepsie, Paris. Pinel: Nosographie Philosophique, Paris, 1818, vol. iii. Esquirol: Traité des Maladies Mentales, Paris, 1838, vol. ii. Valleix: Guide du Médecin Practicien, Paris, 1851. Herpin: Du Pronostic, &c., Paris, 1852. Trousseau: Clinique Médicale, Paris (mentioned by Habermaas, op. cit. infra). Russell Reynolds: Epilepsy, London, 1861. Tissot: Traité de l'Epilepsie, Lausanne, 1790. Hufeland: Manuel de Médecine, Paris, 1841. Nothnagel: Ziemssen's Encyclopädie, vol. xiv., 1878. Dana: Text-book of Nervous Diseases, New York, 1893. Habermaas: Allgemeine Zeitschrift für Psychiatrie, Band lviii., p. 243. Hughes Bennett: Epilepsy and its Treatment, 1884. Sir William Gowers: Epilepsy, second edition, 1901. Biro: Deutsche Zeitschrift für Nervenheilkunde, Band xxiii., p. 40. Wharton Sinkler: Journal of Nervous and Mental Disease, 1898, p. 601. Tooth: Out-patient Observations on Epilepsy, St. Bartholomew's Hospital Reports, vol. xxxi. Binswanger: Article, Epilepsy, in Nothnagel's Specielle Pathologie und Therapie, vol. xii. Spratling: Journal of Nervous and Mental Disease, 1899, p. 297.

Queen Anne-street, W.

MALARIA AS SEEN IN THE ANDAMANS PENAL SETTLEMENT.

BY ERNEST EDWIN WATERS, M.B., C.M. EDIN.,
CAPTAIN, I.M.S.; OFFICIATING SUPERINTENDING MEDICAL OFFICER, PORT BLAIR.

MALARIA is the disease that causes by far the greatest amount of sickness in the Andamans penal settlement and which consequently causes a serious disorganisation of the labour supply and a heavy financial loss to the administration. In 1902 there were nearly 14,000 admissions from malaria and though only 57 deaths were directly attributed to this disease, yet I am convinced that many patients who died from other diseases had their constitutions undermined by previous malarial attacks. In other words, a healthy man has strong resisting powers to the bacilli of dysentery or tuberculosis, but once his vitality is lowered by malaria he falls an easy prey to these complaints. The tax of malarial fever is a very heavy one; taking 14 days as the average period for which fever cases are non-effective, malaria alone in 1902 accounted for 196,000 labour units (one man for one day) or, at four annas per day, for 49,000 rupees. This represents the labour of 2000 men for 98 days. And all this is exclusive of the cost of quinine, hospital establishments, and medical comforts.

On investigating the causes of this disease one notices that in 1902 the least malarial month was February, with seven inches of rain, that the admissions increased slightly in March, much increased in April, further increased in May, till they reached a maximum in June. In July there was in nearly all districts a decline in the malaria more or less marked, whilst in August and September, the two wettest months of the year, the admissions for fever sharply declined. These statements also apply for the two previous unhealthy years 1900 and 1901, but more especially to the larger stations and districts. Ross Jail and the Female Jail show variations and do not conform to this. Table I. shows precisely the proportion of the monthly malarial admissions in the various areas and the rainfall from January, 1902, to March, 1903, inclusive. The rainfall shown is the average of the whole settlement. In 1902 Ross was the wettest station.

TABLE I.—*Showing the Number of Admissions for Malaria into the Hospitals and the Average Rainfall from January, 1902, to March, 1903, inclusive.*

Months.	Average rainfall.	Ross.	Aberdeen.	Haddo.	Female Jail.	Wimberley Ganj.	Southern District.
1902.							
January	0·12	15	24	67	21	313	218
February	7·28	12	13	41	29	252	199
March	0·53	22	41	52	20	287	312
April	1·93	33	61	85	19	472	608
May	18·59	31	147	156	54	626	793
June	21·47	38	372	312	192	738	817
July	16·49	75	310	253	196	620	484
August	33·65	39	172	129	123	460	279
September	24·83	27	129	109	89	354	211
October	9·44	37	153	77	85	278	212
November	10·96	58	158	98	84	219	186
December	5·38	67	98	51	53	225	242
1903.							
January	0·31	70	70	40	66	186	185
February	4·61	53	49	35	49	200	180
March	*Nil.*	67	88	54	33	310	213

The approximate strengths in the various hospitals during the period mentioned were as follows: Ross, 700; Aberdeen, 2200; Haddo, 1800; the Female Jail, 400; Wimberley Ganj, 2350; and in the Southern District, 3500.

There are two methods in which we may attempt to account for the prevalence of malaria: (1) the purely mosquito theory; and (2) the relapse or recrudescence theory.

I.—THE PURELY MOSQUITO THEORY.

This would require infection from a specific anopheles to account for every attack of malaria, and the malarial admission-rate should be coincident with a marked increase in mosquitoes or at least with more favourable conditions for their existence. Now, our malaria begins in April, the hottest and one of the driest months. It increases and reaches its maximum in June and then declines irrespectively of the rainfall. This feature is constant. If mosquitoes are *solely* responsible for our malaria they must be of a type which flourishes in the hot month of April and the wet ones of May and June, suddenly dying off in July and subsequent months, although these months, from conditions of temperature and moisture, would appear to be equally suitable for their development. More than this the number of cases of malaria from which the mosquitoes may become infected is much greater in May and June and consequently the number of infected and dangerous mosquitoes should be much larger. With more infected mosquitoes the malaria rate should rise, but it undoubtedly falls. (It has been suggested to me that the mosquitoes themselves become so ill from malarial poisoning that they, too, die off. This theory is ingenious but it is hardly practicable to investigate it.) Also, it may be that in July other mosquito-eating insects and animals appear who prey upon the culicidæ and so enormously reduce their numbers.

If we can exclude mosquitoes, does malaria diminish? It does, most decidedly. For the past 15 months careful experiments have been carried out in the Female Jail, one of the most unhealthy and malarious units in the settlement. This experiment was initiated by Major Anderson, I.M.S., and has since been extended by me.

37 women selected from all classes were placed under mosquito curtains, going under them at dusk and coming out in the morning. Their occupation, health, and food in no way differed from any other section of the jail. The remainder of the jail population was divided into two classes. To one class 20 grains of quinine were given in two successive days; to the other no prophylactic issue was made. The effect was most marked. In Class A, in which the women slept under mosquito nets, there were 1007 admissions per 1000; in Class B, who received quinine, the admissions were 2421 per 1000; and in Class C, who received no quinine, they were 4177 per 1000. I believe that the figures would have been better in Class A but for an unfortunate case of chicken-pox in one of the women which necessitated a change in the inhabitants of a second net which had just been occupied. These figures go to show that under conditions prevailing in the Female Jail the exclusion of mosquitoes is an effectual and inexpensive method of reducing malaria.

II.—THE RELAPSE OR RECRUDESCENCE THEORY OF MALARIA.

This theory is somewhat heterodox nowadays but it has some grounds for consideration. To begin with, practically every native who comes to the Andamans has suffered from malaria in his youth and probably has had several attacks of fever. He has not become immune or he would not suffer from malaria or fever. The malarial parasites are supposed to be locked up in the spleen and under favourable conditions will be eventually destroyed there. But it is a matter of common knowledge that in the case of a person who has once suffered from malaria a chill, over-exposure, &c., will induce a fresh attack, even years after the original infection, and that a malarial subject should avoid circumstances where he is likely to be so exposed. Now, as I have said above, most natives have suffered from malaria and on arrival here as prisoners they are subject to new and trying conditions. The climate, water, and food are strange to them, they are worked hard, and they are constantly exposed to sun, rain, and wind. Differing from free men they cannot, if feeling only slightly unwell, leave work for a day or two, change their food, or take life a little easily. They must either work on or go sick to hospital, with the possibility of not being admitted and the risk of punishment. Our hospital figures substantiate this theory. Well-cleared, established stations like Aberdeen, Haddo, and Phœnix Bay are less malarial than out-stations like Goplakabang, but even in the healthy stations it is the men doing hard outdoor work who furnish the bulk of the malarial cases. True, it is these men who have the most inducement to come to hospital; but latterly all our cases of malaria have been examined microscopically and I have yet to find a malingerer who is competent to produce pigmented crescents at will or to arrange for a suitable increase in his large mononuclear leucocytes. It appears to me that the convict may at times derive his fever from the bite of infected mosquitoes but that he may also have a relapse from a previous attack through exposure, overwork, or some cause lowering his vitality. Again, while a healthy, well-nourished man may only suffer slightly from fever after an infected bite, it is obvious that a weakly, chilled, tired man whose powers of resistance are much lowered would in all probability suffer to a much greater or more serious extent.

This question is admirably worked out by Attilio Caccini[1] of Rome. He gives specific instances (with detailed examinations of cases) where fever has re-appeared within 48 hours of exposure to damp and cold, even in patients who were taking quinine regularly at the time of exposure. He further proves "that in patients not treated with quinine, in whom the primary malarial infection has exhausted itself, the attack recurring after a long period always comes on after the intervention of one of these recognised determining causes." In these cases parasites rapidly reappear in the blood. He says, further: "The attack recurring after a long interval exactly resembles true first infection—that is, the paroxysms of fever may be more or less regular; attacks may or may not occur at long or short intervals and they react equally against the quinine treatment. But whereas regular systematic treatment prevents attacks recurring at short intervals it does not prevent those recurring at long intervals, which come on after a space of time which may reach 12 months of apyrexia. The attack always occurs upon the intervention of any of the organically debilitating causes mentioned. Thus with patients treated with quinine and divided into categories according to the method of treatment every category shows the same percentage of attacks occurring at long intervals. In every case the attack followed upon the intervention of one of the debilitating causes above noted. Any patient guarding against debilitating accidents and observing a regular diet may remain free from attacks of fever for a long while (from six to seven months) but suffers a relapse after that time upon exposure to cold, fatigue, wounds, or illness."

Now these statements correspond with our experience here. We know that exceptionally hard work will send up the fever admissions from the men exposed to it, especially when proper precautions are not taken. On Ross Island in the period from December to March there is usually a strong cool wind blowing and it is to this that the population ascribe their fever. They say beforehand that when this wind begins they get fever, and they certainly do. I do not think that at that time there were any anopheles mosquitoes on the island—certainly one could never catch them—and even culices were very rare. The wind came directly from the north-east over some hundreds of miles of sea, so that the chances of infected mosquitoes being carried in may be dismissed.

The probability is that both these theories are true and that direct infection from the mosquito and relapses due to exposure together and unitedly account for the malaria as seen here.

THE MEANS OF DIMINISHING MALARIA.[2]

Any measures that will diminish the heavy malarial sick-rate are naturally of the greatest value and much attention has been paid to this question during the past year. So far as our present knowledge goes three, or possibly four, methods are supposed or are likely to be efficacious (always remembering that we are dealing with a malaria-infected population). These are: (1) the destruction of all anopheles mosquitoes; (2) the prevention of infection of, and by, anopheles mosquitoes by means of nets or combustible pastilles; (3) the dosage of the whole population with quinine to an effective extent; and (4) the keeping of the population "fit" or in such a good state of general health that relapses or recrudescences are unlikely.

1. *The destruction of all anopheles mosquitoes.*—This I have no hesitation in saying under local conditions is impossible. The large area of the settlement, the dense vegetation, the heavy rainfall and consequent swamps all make such a task impossible of fulfilment. It may be done over comparatively small areas and in the older stations, but to do it over the 100 and odd square miles within the settlement boundaries is not practicable. But even on a small scale much good may be done and I propose to describe in detail the results of the efforts made. The first attempts were made on Viper, a small island accommodating about 1000 convicts and some 250 troops and police. This island has no streams; its water-supply is from collected rain water, one or two wells, and from a daily ration brought from another station. The island is thoroughly cleared and well drained. Like all other stations the buildings are of wood and as a protection against fire there are wooden fire barrels distributed round all the houses and barracks. These fire barrels were the main sources from which the mosquitoes came and early in the year every barrel swarmed with larvæ and mosquito eggs could always be found. Generally these larvæ and eggs were of the culex variety, but occasionally anopheletes were discovered. The work of getting rid of mosquitoes was commenced in June with a few convalescents who were instructed to keep these barrels clean and to pick up cocoanut shells, &c. The results were excellent so far as the number of mosquitoes were concerned. On every hand one got the same response to inquiries, from officials and convicts alike. The mosquitoes were much less numerous, nets were no longer a necessity, and life was rendered much more tolerable in consequence. At the same time experiments were made with combustible pastilles, so evil-smelling as to be calculated to drive out the mosquitoes from any building in which they were burnt. These were

[1] Journal of Tropical Medicine, May and June, 1902.

[2] Vide Ross's report on Malaria at Ismailia, 1903.

made of sulphur, charcoal, and saltpetre but were not satisfactory. They were expensive (the cost to burn them twice weekly throughout the settlement at the scale of 1 per 1000 cubic feet would have been about 10,000 rupees) and they were only temporarily effectual. The general opinion was that so long as they were burning neither man nor mosquito could exist within their range but that as soon as they had burnt out sufficiently to permit the inhabitants to return the mosquitoes returned also. Following the small Viper experiment and other small experiments elsewhere a more thorough trial was decided on. In November the Chief Commissioner issued orders forming mosquito brigades in every station and these commenced operations on Dec. 15th. Information and literature, including Ross's book, had previously been widely circulated and the petty officers in charge of the gangs were instructed in their duties. The men of the brigades, numbering in all nearly 200, were equipped with carts, tools, and dippers for searching purposes. Careful arrangements were made to check the exact sleeping places and occupations of all men reporting sick and the blood of every fever case was examined microscopically, often more than once.

In some respects the results of these special gangs have been excellent. Mosquitoes everywhere have enormously decreased—in fact, in many places a mosquito is quite a rarity and as such is immediately noticed. The exact prevalence in bungalows appears to depend on the interest and enthusiasm of the occupants. Many residents have assured me that they can now sleep without nets or punkahs and the convicts all tell me that mosquitoes have much diminished. Besides this the general sanitation of the settlement has much improved. Drains have been cleared, puddles filled, rubbish removed, and undergrowth cut back to a considerable distance. The improvement in the general cleanliness is most marked and in this respect alone the mosquito gangs have done much good. But when we examine the effect of these measures on the malarial admissions we do not obtain such encouraging or consistent results. The results from the principal stations and districts are as follows for the three months during which the brigades have been working (Table II.).

TABLE II.—*Ross Island.*

Period.	Approximate strength.	Admissions for fever.
December, January, and March, 1899-1900	660	43
,, ,, ,, 1900-01	698	82
,, ,, ,, 1901-02	735	48
,, ,, ,, 1902-03	718	203

Of this season's admissions, mullahs furnished 67 and sweepers 25. 49 admissions came from No. 1 barrack and 29 from each of the others. Government House, the senior medical officer's bungalow, and the mess, which are close to one another, each had ten fever admissions, whilst two other bungalows, which are side by side, gave 13 and 12 admissions respectively. No other house had anything approaching this number. These cases are very difficult to explain on the purely mosquito theory. In the patients (boatmen) from the senior medical officer's bungalow distinct parasites were found and in two cases crescents; at that time of the year it was impossible to discover an anopheles on Ross Island. The patients generally and many of the residents, too, ascribed their fever to the onset of the north-east monsoon which, they say, chilled them and gave them fever. On the other hand, both the areas above named are thickly covered with vegetation which gives good mosquito cover.

TABLE III.—*Female Jail.*

Period.	Approximate strength.	Admissions for fever.
Three months in 1899-1900	359	140
,, ,, ,, 1900-01	389	109
,, ,, ,, 1901-02	406	80
,, ,, ,, 1902-03	401	168

The results shown by Table III. are similarly disappointing. It is easy to explain why the Female Jail should be malarious, but it is not easy to explain why it should have been more malarious this year than usual, when stringent sanitary precautions were exercised and when half the inhabitants were taking 20 grains of quinine twice daily.

At Ross hospital the blood of every patient coming to hospital was examined for malaria parasites, whatever his disease may have been. In all, 527 patients [3] were examined and parasites were found in 136 cases. The analyses showed intracellular hyaline, 49 times; intracellular pigmented, 36; extracellular forms, 20; and crescents, 31. There were also combinations of these varieties. In many cases crescents were found in enormous numbers, as many as 180 being counted in a single slide. In other cases crescents abounded in the blood of men feeling perfectly well, having normal temperatures, and who were anxious to go out of the hospital.

TABLE IV.—*Aberdeen.*

Period.	Admissions for malaria.
December to March, 1899-1900	312
,, ,, 1900-01	234
,, ,, 1901-02	70
,, ,, 1902-03	215

At Aberdeen Hospital, too (Table IV.), careful blood examinations were made, but the results are included with those of Haddo hospital.

At the Female Jail the malaria admissions for January were 66; for February, 49; and for March, 33. Microscopic examination of the blood in the 212 cases which were examined (being all the admissions) revealed parasites in 125 cases, of the following varieties: hyaline intracellular, 47; intracellular pigmented, 36; extracellular pigmented, 26; and crescents, 16.

TABLE V.—*Haddo, Chatham, and Phœnix Bay.*

Period.	Haddo fever admissions.	Chatham fever admissions.	Phœnix Bay fever admissions.
1899-1900	152	154	186
1900-01	89	54	92
1901-02	78	33	58
1902-03	49	28	49

In Haddo, Chatham, and Phœnix Bay (Table V.) the results are favourable; everywhere there were fewer cases, although in 1902 the population tended to increase steadily. Possibly the inhabitants of these stations are less exposed in the cold season to changes of temperature than most other men and consequently are more likely to benefit from anti-mosquito efforts. As in other cases, careful blood examinations were always made. 194 fever cases were examined and parasites were found in 173 cases of the following varieties: intracellular hyaline, 101; intracellular pigmented, 23; intracellular ring forms, 21; extracellular pigmented, 10; crescents, 10; segmenting forms, 6; and flagella 2. This blood examination was carried out by Dr. Sanyal who ascribes the high parasite rate to the facts that only "fever" cases are included, that there was no prophylactic issue of quinine going on, and that no quinine was given to the patients until the blood examination had been made and the diagnosis checked.

SOUTHERN DISTRICT.

It is in an unhealthy area such as this that the mosquito brigade work is of special interest. Attention was specially directed to Viper, Namunaghar, Dundas Point, and Minnie Bay (Table VI.):

TABLE VI.—*Showing Number of Cases in Southern District.*

Period.	Viper.		Namunaghar.		Dundas Point.		Minnie Bay.	
	Average for 3 years.	1902-1903	Average for 3 years.	1902-1903	Average for 3 years.	1902-1903	Average for 3 years.	1902-1903
December	35	76	101	61	49	26	5	9
January	40	53	75	41	33	35	23	12
February	52	64	59	27	43	34	43	19

[3] These figures include sick from Aberdeen.

Of the 129 admissions from Namunaghar in the three months 83 came from one barrack—the temporary one—but the firewood cutters (who are always unhealthy) lived in this barrack. Altogether the blood of 592 fever cases was examined. In 289 of these malarial parasites were discovered.

TABLE VII.—*Wimberley Ganj Subdivision.*

Period.	Approximate strength.	Admissions.
1899-1900	1480	520
1900-01	1944	916
1901-02	2161	811
1902-03	2352	603

In Wimberley Ganj Subdivision, too (Table VII.), there is a decline in the admission rate as compared with previous years and that although the population of the subdivision has increased. In 1062 blood examinations made from October to February parasites were found in 892 cases, of the following varieties: extracellular hyaline, 851; extracellular, 19; and crescents, 22.

The above tables are, of course, but a summary of all the information which has been collected on this subject but which want of space prevent me from inserting. This account does not exhaust what has been done in the direction of mosquito brigades. In the villages, both ticket-of-leave and free, the system has also been inaugurated and men have been told off to attend to puddles, sanitation, and general cleanliness. The effect of this action is bound to be most marked.

I am indebted to Mr. Lowis, the subdivisional officer of Ross, for much assistance in connexion with the mosquito brigades and for the following information as to local varieties of the insect.

The commonest variety of mosquito in Port Blair is *Culex fatigans*. It is a house mosquito, breeding in any convenient collection of water and biting at all hours, but especially at night. The only other known variety of culex locally found is *Culex concolor*, a larger insect than *Culex fatigans* and possessing larvæ of cannabalistic habits. There is one other small culex found but it has not yet been identified. Of the subfamily stegomyia (Theobald) two species are found—namely, *Stegomyia fasciata* and *Stegomyia scutellaris*. Both are very common here, but they do not affect houses as much as the true culex. They breed usually in stagnant pools containing vegetable débris, such as hollows in trunks of trees. This species wanders further from its breeding-places than culex does and is often found where there is no possible breeding-place and where *Culex fatigans* disappears. Only one variety of anopheles is known here, the *Anopheles Rossii*, and that has been found only in two places. The breeding-place which this variety affected was a series of pits excavated during the building of a convict barrack. This variety was also discovered at Dundas Point. Except when these pits were in existence it was impossible to find any anopheles larvæ on Ross Island. Another mosquito of the subfamily panoplites has also been caught but only in small numbers. Of *corethra* three varieties were discovered, one of which breeds largely in the Ross drinking-water tank and is the only larva to be found there. These corethræ appear to have no biting apparatus and therefore can hardly be said to be carriers of infection. One variety has not hitherto been described and appears to be a new one discovered by Mr. Lowis.

On the whole, mosquito brigades are of distinct benefit; for some unexplained reason they have not succeeded this season in Ross and Aberdeen, but in the other districts the results are encouraging. Undoubtedly the stations are much cleaner and the number of mosquitoes less, but the latter are far from being exterminated; they no longer flourish in the fire barrels or in the immediate vicinity of barracks, but except in very small or special areas or where there is enthusiastic European supervision these pests will remain and will continue to carry infection.

2. *The prevention of infection of, and by, anopheles mosquitoes by the use of nets or combustible pastilles.*—At first sight this appears to be the remedy offering the best prospects. We know that a net will keep off mosquitoes and we also know, from 15 months' steady observation in the Female Jail, that persons sleeping under a net have only one-fourth the risk of malaria that unprotected people have and when attacked with fever are a shorter time in hospital. The cost, too, of mosquito netting is comparatively little. Why not, then, introduce it? The great drawback to netting is its interference with ventilation. Even under an ordinary mosquito net the difference in the freshness of the air inside and outside is quite marked and this is equally the case with a larger net containing 20 or 30 people. The women in the jail complain much of the heat under the net and it is absolutely certain that if nets are to be taken into general use as malaria guards the amount of cubic space per head must be very considerably increased, for there is practically no movement of air through the meshes of a thick net. The question is of much importance owing to the prevalence of phthisis and one is confronted by two precisely opposite problems. To check malaria in this way one must put up nets to exclude mosquitoes and consequently seriously interfere with the air-supply. On the other hand, to check phthisis we must have better ventilation, more air, and more superficial space. Which is the better? I think the balance is in favour of more space and more air combined with measures to be presently discussed.

3. *The dosage of the whole population with quinine to an effective extent.*—This procedure is strongly recommended by many authorities, more especially by the Italian observers and by Koch. The theory is that the administration of one gramme of quinine daily for two successive days and the repetition of this every week will check the occurrence of malaria by inhibiting the growth of parasites. The local opinion is against this theory, but quinine had never been given in sufficiently large doses nor had the distribution been made on sufficiently systematic lines. Naturally, over a district comprising 130 square miles of country and populated by men of very varying occupations, who cannot always be caught at meal or other parades, the issue of quinine regularly is a very difficult matter. Major Anderson's experiments showed that small doses of quinine, such as from two and a half to five grains daily, had absolutely no effect on the malaria admissions of the Female Jail but that the effects of large doses were more favourable. Longer observation has confirmed this view. The administration of 20 grains of quinine twice weekly has halved the admissions for malaria but the remedy is not a specific. During the malarial outbreak last year I directed that a further experiment should be made at Bindrabun, probably the most malarious place in the settlement, but the results were most disappointing so far as this station goes. 120 men were taken and their names recorded. To the even numbers 20 grains of quinine were given on two successive days, to the odd numbers nothing. The results were as follows (Table VIII.):—

TABLE VIII.

—	June.		July.		August.	
	Quinine.	No quinine.	Quinine.	No quinine.	Quinine.	No quinine.
Admissions.	42	42	31	33	21	22

The average stay in hospital for those men taking quinine was 5·56 days and for those taking no quinine 5·60 days. After August the special experiment was discontinued.

In June last an attempt was made to check the malaria by an issue of ten grains of quinine to every convict on two successive days, repeated weekly. With the help of the executive authorities diaries were arranged and parades were organised. Compounders accompanied by petty officers were sent round the districts and carefully instructed. Each man had his route and times marked out for him, so that all concerned knew what arrangements to make. In the larger stations private servants, boatmen, and others in special employ were attended to by travelling compounders who visited the different houses and so avoided the inconvenience of such men having to attend parades or hospital. This prophylactic issue lasted from June 16th to Dec. 1st. Altogether 496 501 doses (each of ten grains) were issued and about 650 pounds of quinine expended. Over the whole period of five months more than 80 per cent. of the population were receiving this drug, but the results were nothing like what they theoretically should have been nor were they consistent. Thus, for Ross the average admissions from July to December inclusive were as follows: two years no quinine, 150; admissions with quinine, 1902, 236. For

Aberdeen the average admissions from July to November inclusive were as follows: two years no quinine, 960; admissions with quinine, 1902, 922. (There were 300 increase in strength of this station.) For Haddo the average admissions from July to November were as follows: two years no quinine, 818; admissions with quinine, 1902, 877. (There was some increase in strength of this station.) For the Southern District the average admissions from July to November were as follows: three years no quinine, 1234; admissions with quinine, 1902, 1372. (There was considerable increase in the strength in the Southern District.) For Wimberley Ganj the average admissions from July to November were as follows: two years no quinine, 1671; admissions with quinine, 1902, 1759. (There was considerable increase in strength of this station, so that the fever admission rate per 1000 of strength is lower.) For the Female Jail the total admissions for fever in 15 months were as follows: (*a*) receiving quinine, 362, with an average stay in hospital of 5·5 days; and (*b*) not receiving quinine, 695, with an average stay in hospital of 7·35 days. (The strength of each class was nearly the same.)

At first sight it would appear that the issue of quinine has done little or no good or at most that the results have been inconclusive. But 1902 was a particularly unhealthy year and it may fairly be assumed that but for the quinine the malarial admissions would have been even higher than they were. Thus in the two unhealthy districts of Southern District and Wimberley Ganj the fever admissions in the pre-quinine period of 1902 were very much higher than in previous years, whilst after quinine was given the figures assimilate very closely. In the Southern District the three years' average malarial admissions from January to June inclusive were 1983, the average from July to November being 1234. The malarial admissions during the first period in 1902 with no quinine were 2938 (an increase of 955) and during the second period in 1902 with quinine 1374 (an increase of 140). In Wimberley Ganj the two years' average malarial admissions, from January to June inclusive, were 2149, the average from July to November being 1671. The malarial admissions during the first period in 1902 with no quinine were 2668 (an increase of 519) and during the second period in 1902 with quinine 1759 (an increase of 88). Thus quinine seems to have brought the very unhealthy year back to the level of the previous ones, although the population has increased. It is possible that the prevalent type of malarial parasite is largely responsible for the inefficacy of quinine as a prophylactic. One of the commonest parasites is the one associated with malignant tertian fever and this, as is well known, is particularly resistant to quinine. This fact, with the known frequency of malignant crescents existing without fever or symptoms, has an important bearing on malarial prophylaxis.

4. *The keeping of the population "fit" or in such a good state of general health that relapses or recrudescences are unlikely.*—This suggestion has been already discussed above under the relapse theory and little more requires to be said. It is obvious that the better general health our men are in the less likely they will be to succumb to malaria or other disease. But here the great difficulty is the interference with discipline and with the work of the administration. If labour in swamps, forests, and brickfields is prohibited, if work is to stop at every shower of rain, then I do not doubt that the sickness will decrease, but it does not appear advisable to recommend any such procedure or to attempt to interfere with necessary forms of convict labour in the settlement. Apart from any such steps we may improve the cooking and food-supply, we may introduce drying rooms, or issue extra clothes and so insure that the convict shall have dry things to sleep in. Sanitation, air space, and so on can be attended to and an occasional extra ration may be issued when the labour is excessively trying or hard. With this object in view it is proposed to utilise the Aberdeen drying room for one particular section of convicts during the wet season, to make such arrangements as will insure dry clothes to them and possibly to make special arrangements about their food. The results will be of great interest and will be carefully noted.

I have detailed above the four principal methods in which we may combat malaria; it is now necessary to discuss their relative merits and practicability.

It has been pointed out that as far as actual admissions go the mosquito net undoubtedly has the best effect, especially in the case of women living under jail conditions, not doing hard outdoor labour or exposed to rain and storm. But the ventilation difficulty is insuperable unless a very much larger amount of cubic space is provided—a larger amount than one could justly recommend. We are left, then, with mosquito brigades, prophylactic quinine, and general sanitation, and it is to these that we must look as means of checking malaria. I have endeavoured to show that the two former have already had some good effect. It is not unreasonable to hope that as experience is gained in the working of the mosquito brigades better results may be hoped for. The prophylactic issue did do good and, I think, not only by diminishing the admissions but over the whole settlement by lessening the periods of detention in hospital. This opinion is supported by the various medical officers in charge of the settlement hospitals, especially in the Female Jail. For general sanitation we must rely largely on the executive officers in immediate charge of the convicts. It is to their interest to have a low sick rate, for the fewer men they have in hospital the more easily can remunerative work be undertaken.

In conclusion, I advocate the following measures as the most suitable for checking malaria:—

1. The retention and, when necessary, expansion of the existing mosquito brigades. The expert trained part of each gang should be permanent and not available for other work. The coolies, drain-makers, &c., may, of course, be taken on and off as required, but the petty officer of the gang who knows what a mosquito larva is like and who can recognise culex eggs and knows the usual hiding and breeding places of the insects should be a fixture.

2. The general administration of quinine throughout the settlement in prophylactic doses.

3. The establishment in the outlying and unhealthy stations of branch dispensaries supplied with quinine and simple remedies. This plan was tried last year with much success both in the treatment of malaria and also of dysentery. It at times enabled us to get hold of patients earlier than we otherwise should have done and to save invaluable time in treatment. So far we are hampered by want of an adequate medical and dispensing staff, but it is hoped that more assistance will soon be available.

4. The provision of drying rooms or drying frames at every station and as a corollary the issue of extra clothing. I do not regard the drying room as a panacea for all evils, but I am sure that giving a man dry clothes to sleep in and a good, hot, well-cooked meal when he comes home from work will enable him much more successfully to fight against malaria and other climatic diseases.

5. The restriction of such unhealthy forms of labour as firewood cutting, swamp work, &c., to the narrowest limits and the granting to men so employed of a small extra food ration. I regard the proposed substitution of coal for firewood as a most valuable idea and one which cannot but have a good effect on the general health.

6. The continual stimulation of local public interest in the health of the convicts. One would like to see competition between stations as to which should have the lowest sick-rates and death-rates and whose malarial admissions should be fewest.

I should like to add a few remarks on the clinical characters of the malaria as locally observed and on the various methods of treatment in use.

Owing to the nomenclature adopted by the Royal College of Physicians of London we are obliged to define our malaria cases as "remittent fever" or "intermittent fever." This is a most unsatisfactory classification; many cases are remittent (in the sense that the temperature does not touch normal) for the first two or three days and then assume an intermittent type for a longer period. The patient in such a case may recover and be returned under either heading according to the ideas of the medical officer in charge of the case. On the other hand, the patient may die after a stay of some weeks in hospital, during the latter part of which stay the temperature may have been normal, intermittent, or even subnormal at times. Yet that case may reasonably be shown as remittent fever by one man and as intermittent fever by another. In the Port Blair returns "remittent fever" may be taken to mean a severe type of malarial fever, and all cases dying from remittent fever are considered as malarial. These "remittent" cases occur in all parts of the settlement, but especially in the less cleared areas like the Wimberley Ganj

and Viper subdivision. 148 cases with 48 deaths were thus returned in 1902. Many of the cases are rapidly fatal, the patients often being brought to hospital in a dying condition. Three or four days are a very common period for the patient to survive and delirium and coma are frequent before death. Hyperpyrexia is not common, though in one fatal case a temperature of 110° F. was noted and in another non-fatal case one of 107°. The men attacked are often old malarial subjects who have had many previous admissions for the disease; one patient had 24 previous admissions recorded, others had 15, 12, 10, and so on.

Malarial parasites are occasionally but not often found. As is well known in these pernicious cases parasites are often absent from the peripheral circulation. On post-mortem examination the outstanding features are the general congestion of the organs, especially of the brain and its membranes, the abundance of cerebro-spinal fluid, and the enlargement of the liver and spleen. The latter in 29 examinations averaged 22 ounces in weight, whilst the liver was frequently well over 70 ounces. These cases coincide very closely with those described by Pewintzky [4] of St. Petersburg in his essay on pernicious swamp fever. The possibility of some of these cases being cerebro-spinal fever was considered, but no definite evidence of this disease was obtained either clinically or microscopically.

Some of these remittent cases yield very well to treatment, but others are most intractable. Hypodermic injections of quinine are freely given, in some cases with much benefit, only rarely with none. Large doses of quinine by the mouth and by the rectum have also been tried. Methylene blue acts well in some obstinate cases. Latterly we have been giving "mass doses" of 30 grains of quinine by the mouth or hypodermically and in most cases with good effect. Often the temperature falls at once and remains down. In no case have we noticed ill-effects from these large doses, nor is hæmoglobinuria known.

An attempt is now made to examine microscopically the blood of every patient who comes to hospital complaining of fever and in this way the blood of 4304 patients has been searched. In many cases two, three, or even more examinations were made. Parasites were found in 2338 cases, the chief varieties noted being intracellular hyaline in 776 cases; hyaline ring form (malignant tertian) in 438 cases; pigmented intracellular in 704 cases; pigmented extracellular in 273 cases; crescents in 123 cases; segmenting forms in 20 cases; and flagella in two cases. More attention was paid to the presence or absence of parasites than to the particular variety, but it is interesting to note that quartan parasites were far from rare and would often resist quinine for some days.

It has been stated [5] that native children frequently harbour parasites without symptoms or rise of temperature. This I can partly confirm. Many children in whose blood we found parasites said that they were perfectly well, but on investigation they were found to be suffering from fever or from enlarged spleens. For example, *all* the children in the Female Jail and attending the Aberdeen school were examined. Of 158 children parasites were found in 58, and of these on examination 40 had fever or enlarged spleen, whilst 18 had no fever. The varieties of parasites were as follows: intracellular hyaline in 22 cases; intracellular pigmented in 23 cases; extracellular forms in 10 cases; and crescents in two cases. Again, at Haddo 68 healthy-looking persons (including Andamanese adults and children, and school children) were examined. Parasites were found in 11 cases, but all of these on examination were found to be suffering from slight fever.

With regard to the diagnosis of malaria by means of differential bloodcounts our results do not altogether agree with those of Rogers. Of over 63 counts and never of less than 500 leucocytes the average is: large mononuclears, 14 per cent.; lymphocytes, 25 per cent.; neutrophiles, 59 per cent.; eosinophiles, 5 per cent.; and others, 2 per cent. Rogers claims 15 per cent. of large mononuclears as a diagnostic sign in malaria, but we do not always get such a high percentage. We have taken specimens in which the crescents were double the large mononuclears and yet the percentage of the latter was only 14 per cent. For instance: large mononuclears, 14 per cent.; lymphocytes, 21·8 per cent.; neutrophiles, 60 per cent.; eosinophiles, 2·8 per cent.; and others, 1·4 per cent. The actual count was 501 and the crescents found numbered 137. The red blood corpuscles numbered 4,026,000 and the white blood corpuscles 6000 per cubic millimetre. On the other hand, in a case of dysentery where the patient did not complain of fever the following count was made: large mononuclears, 16·3 per cent.; polynuclears, 46·9 per cent.; lymphocytes, 34·2 per cent.; eosinophiles, 1·0 per cent.; and others, 1·6 per cent. The total count was 509 and the crescents present were 58. Here the malarial factor of large mononuclears was present, even though the usual dysenteric increase of lymphocytes was marked. Altogether, 265 differential blood counts have been made and many results of considerable clinical interest have been elucidated.

The convicts whom I have trained for microscopical work have been of the greatest use. These men are now well conversant with the different forms of parasites and they can make and stain their own preparations and in some cases can perform differential blood counts.

Port Blair, South Andamans.

[4] Journal of Tropical Medicine, July, 1902.
[5] Report of the Malaria Commission of the Royal Society.

CHRONIC SUPPURATION IN THE MIDDLE EAR; THROMBOSIS OF THE LATERAL SINUS; GENERAL SEPTIC INFECTION; OPERATION; VENOUS TRANSFUSION; RECOVERY.[1]

BY W. M. WILLIS, F.R.C.S. ENG.,
ASSISTANT SURGEON TO THE NOTTINGHAM GENERAL HOSPITAL AND TO THE NOTTINGHAM CHILDREN'S HOSPITAL.

CHRONIC suppuration in the middle ear is an extremely common disease and in view of the serious complications which sometimes ensue in consequence of its persistence it is well deserving of consideration and adequate treatment. However the inflammation originates, its persistence is to be found in the fact that inefficient drainage exists and this arises from several causes. There is an anatomical cause, which is a bar to efficient drainage in the case of suppuration within the tympanic cavity, inasmuch as that portion known as the attic is a sort of natural reservoir the floor of which is on a higher level than that of the floor of the general cavity of the tympanum and discharge from this position will only occur by overflow. It is common for the inflammatory process to involve the mastoid and here we have isolated cells which communicate with the general tympanic cavity through the largest of them known as the antrum. But the communication of the antrum with the tympanum is reduced in disease, so that efficient drainage is easily impaired. Thus from these causes we have a collection, varying slightly in amount from time to time, but always more or less existing, of what may be termed residual pus and this is present under a certain amount of pressure or tension.

In addition to the foregoing there is a pathological reason why efficient discharge is prevented and this is to be found in the presence of granulation tissue which is present in varying quantity both within the tympanum and on the outer side of the perforation in the tympanic membrane through which the pent-up matter originally made its escape and from which it has continued to issue. Two facts have so often presented themselves to me that I believe them to be true. The first is that the disease in question is eminently curable if freed rainage is established and maintained, and the second is that by reason of the long time some of these cases are allowed to persist either they must be looked upon with apathy or indifference or inadequately treated. If the bar to efficient drainage found in the granulations before alluded to be removed by treatment directed through the meatus and the aperture in the tympanic membrane be enlarged, and subsequently the tympanum be kept surgically clean, the patients in many of these cases will quickly get quite well. Some, however, will not and more extensive measures will be required. For these, when the less severe methods have been thoroughly tried and

[1] A paper read before the Nottingham Medico-Chirurgical Society on Jan. 21st, 1903.

failed, the operation of opening the mastoid antrum or that known as complete mastoidectomy will need to be performed. This can be urged with much confidence as a cure can be promised and the mortality *per se* may be disregarded.

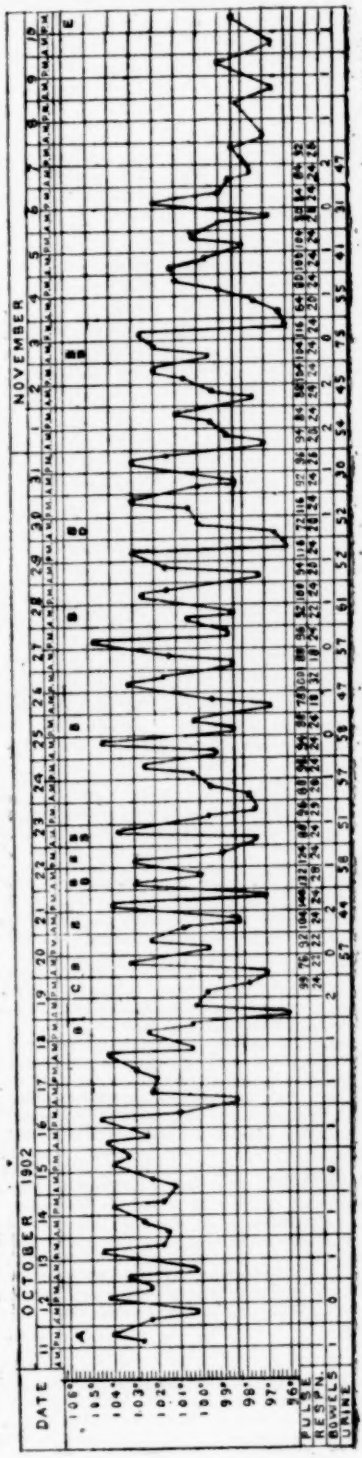
Cases will have to be decided upon on their own merits. In some an operation on the lines of that originally devised by Schwartze will be adequate but in others the more extensive proceedings practised and described by Stäcke will be needed. In either operation it is necessary to have an accurate knowledge of the anatomical structure of the parts and to exercise an abundant care in the steps of the operations; but provided these conditions can be complied with then the operations are reasonably safe and will afford good results. There will be careful and patient subsequent treatment necessary oftentimes, but in the end a cure will be effected.

These preliminary observations on chronic suppuration in the middle ear serve as a preface to the description of a case recently under my care, in which prolonged suppuration was followed by thrombosis of the lateral sinus, extending into the jugular vein, and subsequently by general septic infection as evidenced by signs of inflammation in the lung and effusion of fluid into the pleural cavity and repeated rigors.

The patient, a male, aged 19 years, was admitted into the Nottingham General Hospital on Oct. 11th, 1902. He complained of pain in the head and gave the following history. There had been a discharge of matter from the right ear for nine years, it having followed an attack of scarlet fever. One week before admission he was seized with sudden illness and suffered from shiverings, vomiting, and intense pain in the head. Coincidently, he stated, the discharge from the ear ceased. His condition on admission was as follows. The temperature was 102·8° F. He had pain in the head, especially on the right side, stiffness and tenderness of the muscles of the back of the neck, and some retraction of the head. There was an indistinct fulness to be felt in the neck high up just below the mastoid process. He was under the care of Mr. Joseph Thompson at this time who in view of the patient describing himself as feeling better, and as the temperature was falling, and there being no urgent symptoms, decided to watch the case for a time. His condition remained much as above described until Oct. 18th, when, for the first time since admission, he had a rigor which lasted for 20 minutes and the temperature rose to 105·2°.

On Oct. 19th Mr. Thompson, being unable to attend, asked me to see the patient and I then learnt the fact of the rigor on the evening of the 18th and found that during the time he had been in the hospital, whilst there had been no rigors other than that mentioned, yet there had been an extremely oscillating temperature which the accompanying chart will show. In addition to the temperature there were present headache, purulent discharge from the right ear, tenderness and stiffness of the muscles of the back of the neck, and a fulness down the upper half of the anterior border of the sterno-mastoid on the right side. There was no optic neuritis.

I formed the opinion that he had a thrombosed lateral sinus and operated on the same morning. I first turned down a semilunar flap about two inches in diameter, one side of the incision falling just behind the pinna and the other nearer the occipital protuberance. Baring the bone and drawing the pinna well forward I defined the bony margin of the external auditory meatus. I then opened the mastoid antrum and cleared out a small quantity of inspissated pus which it contained. The next step consisted of trephining over the lateral sinus, exposing it by the removal of a half-inch disc of bone. An incision into the sinus revealed the fact that it was full of clot. Leaving the skull I now turned to the neck and exposed the internal jugular vein and found that the thrombus extended low down into this. I therefore ligatured it as low down as possible but could not get below the clot, and excised some one and a half inches of the vein above the ligature. Returning to the skull I slit open the sinus and removed the clot and syringed through with sterilised water from the sinus to the jugular vein exposed in the neck, washing out thereby all the contained clot. Bleeding now became free both from the sinus and the jugular vein. The latter was therefore ligatured and the former was plugged with gauze, the hæmorrhage being thus easily controlled. The skull flap was then stitched into position, gauze plugs being in the sinus and in the mastoid antrum,



A, Admission. B, Rigor. C, Operation. D, Transfusion of three pints of saline solution. E, Got up; weight 8 stones 13 pounds. (On Nov. 26th the patient weighed 10 stones 1 pound.)

the ends of these issuing from the respective angles of the wound. The wound in the neck was then closed, and here I may say that this was a mistake, as it suppurated later and had to be completely undone; no harm, however, ensued.

By this complete operation I succeeded in removing nearly the whole of the septic clot and in addition cut off the main supply of septic material from entering the general circulation. I therefore looked for a cessation of the symptoms which had previously existed and hoped for an uninterrupted recovery. But in this I was disappointed. The operation was performed on Oct. 19th and without giving the detailed notes taken from day to day suffice it to say that his symptoms continued. He had repeated rigors and high temperatures, a chart of which is appended. In the intervals of the rigors he felt fairly well but extremely weak.

On Oct. 25th my note says: "Breathing seems a little laboured; crepitations to be heard at the third left rib in front and impaired resonance at the left base." The physical signs remained thus for the next day or two and the rigors were repeated. I therefore resolved to adopt a method which I have not seen described as having been employed for the treatment of undoubted general septic infection.

I think there can be no doubt that it was a case of true septic infection as distinct from septic intoxication—i.e., septicæmia as against sapræmia—this view being supported by the fact that the main part, if not the entire supply, of septic material had been cut off, in spite of which the constitutional symptoms persisted and the condition in the lungs above described supervened. His only hope of recovery I considered lay in an increase in his power of eliminating the poison with which he was saturated and this I thought I could effect for him by largely diluting his blood. On Oct. 30th I therefore admitted into his right median basilic vein three pints of normal saline solution and one ounce of brandy. On Nov. 2nd my note says: "Has had no rigor for several days and there has certainly been an improvement in his condition ever since the transfusion." (See temperature chart.) "There are some dulness at the left base and a diminution of breath sounds and vocal resonance." On the 3rd I opened the median basilic vein of the left arm and removed nearly one pint of blood; I then transfused him with another three pints of normal saline solution and one ounce of brandy. On the 10th my note states: "He has improved immensely since the last transfusion. For the last three days his temperature has been practically normal." (See temperature chart.) On the 3rd the second transfusion took place and the temperature did not finally reach normal until the 7th, but in the intervening four days it was lower on the average and the elevations were not so great when they did occur. The chart for these days suggests a final flicker of the disease. The quantity of urine excreted subsequently to the transfusions did not show any great increase, though it was a little more, but there was marked sweating, his garments being frequently changed when wet through. It was in this way, possibly, that he eliminated toxic elements.

His final recovery was now uninterrupted and he is at the present time perfectly well and was shown at a meeting of the Nottingham Medico Chirurgical Society on Jan. 21st, when this account of the case was read.

In conclusion, I would say that this short paper does not presume to be an elaborate account of the treatment of chronic suppuration in the middle ear, but merely expresses the opinion that that disease is eminently curable, and in view of its complications, should be cured. Secondly, in a brief and imperfect manner the lines on which such treatment should be carried out are suggested and outlined. Finally, in respect of the thrombosed lateral sinus, the operation described is in no way novel, but is the method very frequently adopted. In regard to the history of the case, however, subsequent to the operation, the evidence which the case affords seems to me to warrant the opinion that the patient's life was saved, when he would otherwise have died from septicæmia, by the transfusions which were performed and I venture to submit this for publication as I have not seen any similar case recorded.

Nottingham.

NEW WORKHOUSE INFIRMARY AT BIDEFORD.—The new workhouse infirmary at Bideford, Devon, was formally opened on June 2nd in the presence of a large gathering. The building will accommodate 38 persons and has been erected at a cost of £3248.

THE ANILINE DYES AS THERAPEUTIC AGENTS.

BY ANDREW BALFOUR, M.D., B.Sc., M.R.C.P. EDIN., D.P.H. CANTAB.,

DIRECTOR, WELLCOME RESEARCH LABORATORIES, GORDON MEMORIAL COLLEGE, KHARTOUM.

IN looking over the pages of that excellent compilation the *Medical Annual* for 1903 I was interested to find an article stating that methylene blue has been used with success as a sedative in cases of insanity. Ehrlich and Leppmann[1] in 1890 used this stain as an analgesic, administering it both internally and hypodermically, and reported favourably upon it. They were led to employ it from the fact that methylene blue will stain during life the axis cylinders of both sensory and motor nerve fibres. They stated that colouration of the nerves followed hypodermic injections. Combemale,[2] Gaillard, and Piotrowski denied this action, but, on the other hand, Pilliet[3] confirmed the observations of Ehrlich and Leppmann both as regards the staining of nerves and the analgesic effects, while Combemale admitted that the drug was useful in neuralgic and ataxic pains.

Some years ago I was engaged upon an investigation into the toxic properties of the dye stuffs which was embodied in an M.D. thesis,[4] but the results of which I did not publish. The work dealt chiefly with the effects of these dyes on the public health and more especially with the subject of river pollution, but to some extent it considered them from a pharmacological standpoint. I experimented largely with fish—roach, dace, and gudgeon—and was surprised at some of the curious results obtained. Of peculiar interest was the apparent affinity of certain of the aniline dyes for the central nervous system. Unfortunately neither the thesis nor any of my notes are at hand and I have to rely on my memory, but I well recall that both methylene blue, tetra-methyl-thionine-chloride, $C_{16}H_{18}N_3SCl$, and chrysoidine, the hydrochloride of diamido-azo-benzene, $C_6H_3N_2C_6H_3(NH_2)_2HCl$, exhibited this property to a marked extent. It was found that when fishes were placed even in very dilute solutions of these dyes (1 in 500,000 in the case of chrysoidine) they were speedily killed and on post-mortem examination were found to be stained through and through. The scales took on the stain vividly, the muscles were stained, but above all the brain and spinal cord were deeply coloured. It was hoped that this property might be utilised for staining *en masse* in histological work, but it was found on microscopical examination that the staining was diffuse and useless for purposes of differentiation. These two stains in particular seemed to pass very rapidly into the blood stream, no doubt *viâ* the gill arches, but chrysoidine was by far the most toxic. Indeed, it proved to be the most poisonous of any of the numerous aniline dyes employed. I am not aware that this dye has been used therapeutically though its disinfectant action has been tested.

Methylene blue has proved of value in malaria and to some extent also in bilharzial disease where it certainly produces sedative effects though its precise mode of action is unknown. It seems to me that chrysoidine might be given a trial.

I did not find it nearly so toxic for rabbits as for fish but it would have to be employed at first with caution and probably only after some experiments on mammals had been conducted. It has the property of precipitating the vibrios of cholera quantitatively from solutions in which they are held in suspension. The other azo compounds do not possess this property and I remember that in other ways chrysoidine was found to differ from allied chemical substances.

Any drug likely to benefit those suffering from the invasion of the *Schistosoma hæmatobium* (to adopt the most recent nomenclature) would prove a great boon in Egypt and it is just possible that chrysoidine might succeed where others have failed, while in the light of what I have stated it might also find a use in those nervous cases where methylene blue has been tried with gratifying results.

Khartoum.

[1] Deutsche Medicinische Wochenschrift, June, 1902.
[2] La Semaine Médicale, May, 1891.
[3] La Tribune Médicale, October, 1890.
[4] Andrew Balfour: The Toxic Properties of the Dye Stuffs, with special Reference to their Effects upon the Public Health and to River Pollution (M.D. thesis, gold medal, Edinburgh, 1898).

A CASE OF CONGENITAL DEFORMITY OF THE SKULL ASSOCIATED WITH OCULAR DEFECTS.

By H. WORK DODD, F.R.C.S. ENG.,

OPHTHALMIC SURGEON TO, AND CLINICAL LECTURER ON OPHTHALMOLOGICAL MEDICINE AND SURGERY AT, THE ROYAL FREE HOSPITAL; SURGEON TO THE ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, ETC.;

AND

W. HALLIBURTON McMULLEN, B.S. LOND., F.R.C.S. ENG.,

PATHOLOGIST AND CURATOR TO THE ROYAL WESTMINSTER OPHTHALMIC HOSPITAL; ASSISTANT OPHTHALMIC SURGEON TO THE MILLER HOSPITAL AND ROYAL KENT DISPENSARY.

THE following case is interesting both on account of the remarkable deformity of the skull and also on account of the association with this deformity of certain ocular defects.

The patient is a boy, aged seven years, who was brought to the Royal Westminster Ophthalmic Hospital on account of the prominence of his eyes and slightly defective vision. He was born at full term after a somewhat difficult labour lasting 12 hours, but no instruments were used. His father stated that the head was deformed and the eyes were prominent at birth and that the shape of the head was then much the same as it is now. This statement is confirmed by Dr. Shelmerdine of Sandgate who saw the child shortly after birth. The patient is a backward child; he did not walk until nearly two years of age, became clean in his habits at two and a half years, and began to talk at three years. He has now been to school for two years but only knows a few letters and counts to four or five. For some time his parents have thought that his vision has been slightly defective They have also noticed slight deafness which has increased lately. He has never had convulsions or fits and there is no history of rash or other signs of inherited syphilis.

FIG. 1.

Aspect of patient, front view.

With regard to the family history the patient is the third child in a family of four. All the others are healthy, normally developed, and intelligent. There is no history of syphilis in the parents or of deformity, bone disease, insanity, or fits in any of his relatives.

The patient's present condition is as follows. (Vide Figs. 1 and 2.) He is of somewhat stunted growth (height

FIG. 2.

Aspect of patient, side view.

three feet eight inches) but fairly well nourished. His head is of very peculiar shape, showing remarkable projection upwards of the anterior part of the cranium and very marked bulging in the temporal regions. The face is broad and flat; the eyes are very prominent and widely separated and there are traces of epicanthic folds; the nose is small, the bridge being short and narrow; the mouth is kept open, the lips are rather thick and projecting, and the tongue protrudes slightly between them. The neck is short, not unduly thick, and there is no enlargement of the thyroid gland. His gait is clumsy and slouching and he walks with a decided stoop, the head being thrust forward. His skin is thin and supple and his hair is normal. The principal measurements of the head are as follows: horizontal circumference, 48·5 centimetres; naso-occipital arc, 36 centimetres; binauricular arc, 34 centimetres; antero-posterior diameter, 15·6 centimetres; greatest transverse diameter (bi-temporal), 14·2 centimetres; binauricular diameter, 11·7 centimetres; distance between external angular processes, 10·2 centimetres; height of face, chin to hair, 14·5 centimetres; height of orbits, 3·3 centimetres; and breadth of orbits, 3·2 centimetres. The horizontal circumference is but little below normal, the average measurement according to Still being 49·5 centimetres at six years of age and 51·25 centimetres at eight years.[1]

The most remarkable features are the great excess in height and width. The abnormal height is shown by the great relative length of the naso-occipital and binauricular arcs, the former being practically equal to three-quarters of the total horizontal circumference. The great relative width is shown by the high cephalic index—i.e., $\frac{\text{breadth} \times 100}{\text{length}}$, which works out at 91·7; the average cephalic index in European skulls varying from 75 to 80. The excess in height is limited to the anterior part of the cranium, being due to a very marked upward projection over the frontal region extending back only as far as a point vertically above

[1] Goodhart and Still: Diseases of Children.

the external auditory meatus. The prominence so produced is somewhat compressed laterally and a low wide ridge can be felt in the middle line extending from the glabella to the back of the prominence. Just behind the prominence there is a small depression in the middle line, possibly indicating the site of the anterior fontanelle. The forehead is very high and vertical in the middle line, but on either side recedes markedly, forming a distinct depression above the outer part of the superciliary ridge. The excessive width is due to bulging in the temporal regions so great as to extend outwards on each side considerably beyond the level of the outer surface of the zygoma. This bulging is slightly greater on the left than on the right side, and on both sides it is limited above by the temporal ridge where a well-defined margin can be felt. The temporal muscle is palpable only for about half-an-inch above the zygoma. The superior curved line of the occipital bone is rather prominent and there is a slight mesial ridge on the interparietal portion of the bone and also along the line of the sagittal suture. There are no definite parietal eminences. The superior maxillæ are poorly developed; the palate is narrow and very highly arched and the premaxillæ are deficient; there are only one permanent incisor on the left side and no room for more on that side. Many of the teeth are carious.

There are certain defects, probably developmental, in other parts of the body. On both sides, on extension and supination of the forearm, the head of the radius becomes subluxated forwards, apparently owing to laxity of ligaments. On flexion the head of the bone returns into place. This defect does not impair the usefulness of the limb or interfere with its movements. Congenital dislocation of the radius is a very rare condition; indeed, Stimson was of opinion that the majority even of the few cases reported as such were really cases of unreduced dislocation which had occurred in early life.[2] But in this case it appears probable that the slight defect is congenital as it is symmetrical and associated with developmental defects in other parts of the body. The phalanges of the great toes are abnormally broad: there is slight hallux varus, and the interphalangeal joints are ankylosed with some inversion. The arches of the feet are flat. The knee-joints are rather large and there is slight genu valgum.

With regard to the ocular symptoms, there is very marked proptosis, fully half of each eyeball being in front of the plane of the orbital margin. There is fine lateral nystagmus which is barely perceptible except on ophthalmoscopic examination; the ocular movements are otherwise normal. The pupils react to light and to accommodation. Ophthalmoscopic examination is difficult on account of the nystagmus. The optic discs are white, the margins are well defined, and the foramina of the lamina cribrosa are not visible. The veins are rather tortuous. The appearances suggest post-neuritic atrophy. Vision appears to be fair; the boy can count fingers at six metres with each eye. More exact determination is impossible on account of his defective intelligence. Hearing is slightly defective. He does not hear a watch ticking until it almost touches his ear. The external auditory meatuses and tympanic membranes are normal. The heart and lungs are normal.

The cranium in this case is rather of the oxycephalic or steeple-shaped type, the characteristics of which are great development of the vertical at the expense of the antero-posterior dimensions, the transverse measurements differing but little from the normal. Virchow found that cranial deformity of this type was due to premature synostosis of the parietal bone with the occipital and temporal bones, associated with compensatory development in the region of the anterior fontanelle.[3] The present case is remarkable on account of the very marked projection upwards of the part of the skull in front of the anterior fontanelle while the posterior part of the skull is no higher than usual, and also on account of the very great bulging in the temporal regions. Mr. Henry Power in 1894 published a case of remarkable cranial deformity associated with extreme proptosis.[4] The patient was an infant who died 30 days after birth. A cast of the head and a section of the head itself are now in the Museum of St. Bartholomew's Hospital. The similarity between the head of this infant and the head in our case is striking, the most noticeable features in both being great upward projection over the frontal region and bulging in the temporal region, but in Mr. Power's case these features are more marked than in ours. The skull of the latter case was examined by Professor D. J. Cunningham who found that every suture and synchondrosis of the skull was firmly ossified with the single exception of that between the basi-occipital and the ex-occipital.[5] Probably, then, the deformity in our case also is due to premature synostosis of certain cranial sutures with compensatory development in other regions. Thus it may possibly be explained as the result of early ossification of the lambdoid, parieto-temporal, all or part of the sagittal and perhaps of the coronal sutures, while the great upward development in the frontal region may be due to persistence of the frontal suture and overgrowth in that region.

Cases of cranial deformity associated with ocular defects form an interesting group. Such cases are rare but the ocular defects observed in them are so constant that it appears highly probable that these defects are dependent on, or at any rate are closely related to, the deformity of the skull. The variety of cranial deformity most commonly found in these cases is oxycephaly. Of a series of 19 published cases collected by Friedenwald, in 12 the crania were oxycephalic, in three scaphocephalic, and in the rest various other kinds of deformity were present.[6] Of the associated ocular defects optic neuritis or post-neuritic atrophy is the most important. As a rule, cases do not come under observation until they have reached the atrophic stage. The history of these cases is generally somewhat as follows. The cranial deformity is noticed at birth or very soon after. During infancy the children frequently suffer from convulsions and not uncommonly from epileptic fits when they grow older. More or less defect of vision becomes evident generally at an early age but sometimes not till later in life. Some of the patients are mentally deficient, but the majority possess average intelligence and a few are described as unusually bright and clever. When brought under observation the following are the ocular conditions noted. In nearly all cases there is proptosis, in many divergent strabismus. There is defect of vision varying from slight deficiency to complete blindness in one or both eyes. On ophthalmoscopic examination the discs generally present appearances characteristic of post-neuritic atrophy. Of Friedenwald's 19 cases atrophy was present in 15. In two cases optic neuritis of choked disc type was present when first seen, atrophy supervening later. In one case there was acute neuritis which was entirely recovered from, with restoration of sight. In a case published by Stood the fundus was normal although there was total blindness which was attributed to defective development of the occipital lobes.[7] In many cases vision gradually deteriorates, but in some it remains unaltered.

The pathology of these cases is somewhat obscure. The proptosis is due to malformation of the orbits, which, especially in oxycephalic skulls, are very shallow and abnormally high in proportion to their width, the vertical diameters being equal to, or greater than, the horizontal, as in our case, whereas in the normal skull the horizontal are greater than the vertical measurements. In Power's case the orbits were extremely shallow and very high, the roofs being nearly vertical in position. Weiss and Brugger, who carefully measured four oxycephalic skulls in the Heidelberg Anatomical Institute, found that the average depth of the orbits in these skulls was 10 millimetres less than normal and the cubic contents six centimetres less than the average. This abnormality in shape was principally due to the position of the great wing of the sphenoid which went to form the posterior instead of the outer wall of the orbit. Moreover, the roofs of the orbits were unusually highly arched. They consider that the shape of the orbits is such as to cause the eyeball to occupy an unusually high position and to this largely they attribute the proptosis.[8] Various opinions are held as to the cause of the optic neuritis. Post-mortem examinations have been made in only three of these cases. Michel found hyperostosis of the skull, narrowing of the optic foramina, and pachymeningeal thickening over the cortex.[9] Manz and Ponfix also

[2] Stimson: Fractures and Dislocations (1901), p. 669.
[3] Virchow: Gesammelte Abhandlung zur Wissenschaftlichen Medicin.
[4] Power: Transactions of the Ophthalmological Society, 1894, p. 212.
[5] Swanzy: Norris and Oliver's System of Diseases of the Eye, vol. iv., p. 633.
[6] Friedenwald: Archives of Ophthalmology, 1901, vol. xxxi., p. 405.
[7] Stood: Klinische Monatsblätter für Augenheilkunde, 1884, p. 248.
[8] Weiss and Brugger: Archiv für Ophthalmologie, Band xxiv., p. 55.
[9] Michel: Archiv für Augenheilkunde, Band xiv., p. 39.

found narrowing of the optic foramina and in Manz's case the optic nerves were markedly constricted where they passed through the foramina.[10] It has been suggested, therefore, that stenosis of the optic foramina is the cause of the neuritis. This view, however, is not generally accepted because the optic foramina are usually of normal size in synostotic crania. Weiss and Brugger found no narrowing of the foramina in the four oxycephalic skulls which they examined, but in all four skulls they found the dorsum sellæ large and pushed forward and suggest that the neuritis may be due to pressure during early life on the optic chiasma or on the optic tracts in the neighbourhood. Virchow and Hirschberg attribute the neuritis to some inflammatory intracranial trouble, in most cases probably pachymeningitis which may also be the cause of the cranial deformity.[11] Virchow in his examinations of synostotic crania found that meningeal disease, especially pachymeningitis, was of frequent occurrence. Manz also favours the view that fœtal meningitis and osteitis are the underlying causes of the condition. Friedenwald suggests increased intracranial pressure, the result of premature synostosis, as the cause of the neuritis, which he therefore considers analogous to that associated with intracranial tumours. This explanation cannot be considered satisfactory until it is proved that optic neuritis occurring in cases of intracranial tumour is, in fact, due to pressure merely, a view not universally accepted. Moreover, in many of these cases there seems no reason to suppose that the cranial capacity is diminished and hence no increase of intracranial pressure would occur.

The cause of the whole condition remains quite obscure. In one of Hirschberg's cases there was a history of similar cranial deformity in a maternal grandfather; in another a definite history of syphilis in the parents; but in the majority of cases there is no history of deformity or specific disease in the parents and no evidence of the latter in the patients. The deformity is quite unlike that produced by rickets, and in rickets closure of the sutures is delayed; in these cases it is premature. In our case there is no sign of rickets and there is no mention of its occurrence in any of the published cases. In the present case the existence of a slight degree of cretinism is suggested by the clumsy build, thick lips, largish tongue, and dull aspect. The shape of the head, however, is quite different from that usually associated with cretinism—viz., a broad short head, with flattened forehead, which Virchow found to be produced by premature ossification of the spheno-occipital synchondrosis. Moreover, the abnormal shape of the head was noticed at birth, but the cranial deformity of cretins develops gradually in the early years of life. His skin is thin, supple, and moist; there is no thickening of the subcutaneous tissue, prominence of abdomen, or lordosis; his hands and feet though rather large have not the thick podgy character of the cretin's; he shows considerable activity and curiosity, seldom remaining still for more than a few minutes at a time. It was considered advisable, however, to try the effect of a course of thyroid medication, but no benefit has resulted. It must be acknowledged that at present nothing is known of the ultimate cause of the condition; it remains a problem to be solved probably only when we possess a much fuller and more exact knowledge of ante-natal pathology.

[10] Manz: Bericht der Ophthalmologischen Gesellschaft zu Heidelberg, 1887.
[11] Hirschberg: Centralblätt für Praktische Augenheilkunde, January, 1883.

ROYAL MEDICAL BENEVOLENT FUND SOCIETY OF IRELAND.—The annual meeting of the Royal Medical Benevolent Fund Society of Ireland was held at the Royal College of Surgeons in Ireland on June 1st, Mr. L. H. Ormsby, President of the College, being in the chair. Having approved of the report and statement of accounts, the meeting elected the committee and officers for the year.

BRITISH MEDICAL ASSOCIATION, DUBLIN DIVISION.—The first annual meeting of the Dublin division of the British Medical Association was held at the Royal College of Physicians of Ireland on June 4th, when the following office-bearers were elected for the ensuing year:—Chairman, Mr. Arthur Chance; vice-chairman, Dr. H. T. Bewley; and honorary secretary, Mr. K. E. L. G. Gunn. Dr. F. W. Kidd was chosen to represent the division of Dublin at the meeting of the British Medical Association to be held at Swansea in July next.

CHRONIC VOLVULUS OF THE SIGMOID FLEXURE; INTESTINAL OBSTRUCTION; OPERATION; RECOVERY.

BY HERBERT WILLIAM ALLINGHAM, F.R.C.S. ENG.,
ASSISTANT SURGEON AND LECTURER ON OPERATIVE SURGERY AT ST. GEORGE'S HOSPITAL;
AND
E. CHITTENDEN BRIDGES, M.D., B.S. DURH.,
CLINICAL ASSISTANT AT THE ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.

THE patient was a man, aged 54 years, who for the previous 30 years had been subject to attacks of constipation recurring at periods of from four to six weeks and lasting from five to six days, accompanied by great pain in the lower half of the abdomen. Vomiting usually occurred towards the end of the attacks. At times there was considerable distension of the abdomen. He had always been able to pass flatus per rectum during the attacks and there had been no difficulty with micturition. Towards the end of the attack the bowels usually acted very copiously as the result of medicine (blue pills, black draughts, or cascara sagrada). No blood, slime, or mucus was passed per rectum. There was no pyrexia or loss of weight.

The history of the present attack was as follows. On the evening of April 18th the patient returned home from his office complaining of feeling cold. The bowels had acted once and but slightly. On the 19th, and again on the 20th and 21st, the patient took cascara sagrada with no result except that of much griping pain in the abdomen. There was no vomiting. On the 22nd, shortly after starting for his office, he had to return home on account of severe pain in the abdomen and he felt very faint. There was much straining at stool but with no result except the passage of flatus.

One of us (E. C. B.) saw the patient for the first time on April 23rd; he was lying on his back in bed with his legs drawn up and complained of considerable pain in the abdomen, especially over the left iliac region; this was much aggravated by digital pressure. He had been sick once that morning and had brought up the contents of his stomach. He had perspired very freely during the night and had passed flatus. The abdomen was moderately distended and the percussion note was tympanitic. No peristaltic action of the intestines was seen through the abdominal wall which moved freely on respiration. The liver dulness was slightly diminished. On examination the rectum was found to be quite empty and ballooned; no growth was felt. The pulse was 68, regular, and of good volume. The temperature was normal. The respiration was not hurried and was partly abdominal. The tongue was covered with a dirty brown moist fur on the dorsum. The breath was foul but not fæcal. The urine was loaded with urates. There was no albumin. An enema of soap and water with half an ounce of turpentine was ordered, but with no result except the passage of much flatus; an ounce of castor oil was therefore administered. On the 24th the castor oil had acted three or four times with much abdominal pain, a few drops of blood accompanying the motion. There was no slime. The patient felt sick. The temperature was normal. The pulse was 68; regular and soft. The tongue was furred. On examining the abdomen, which was much less distended than on the previous day, a distinct sausage-shaped swelling could be felt in the left iliac region which caused the patient much pain on digital pressure. This swelling became more distinct and defined when the pain was present. As the patient appeared to be in considerable pain ten minims of nepenthe were ordered, to be repeated, if necessary, during the day. On the 25th the patient felt better; he had no pain to speak of and no nausea or vomiting. He had passed wind freely after an enema (soap and water with half an ounce of turpentine) the evening before but no solid motion. There was no change in his condition on the 26th or 27th. On the 28th he had a bad night. There was much abdominal pain and he felt very sick. The breath was foul (? fæcal). The pulse was 80 and very thin; the temperature was 98·4° F. There were general uniform distension of the abdomen and

much tenderness over the left iliac region and the sausage-shaped swelling could be distinctly felt. Mr. Allingham saw the patient in consultation and agreed that immediate operation should be performed.

Operation.—The ordinary incision for left inguinal colotomy was made but only collapsed small intestine presented itself. On enlarging the wound upwards and downwards and passing the fingers towards the middle line an enormously distended gut was felt which was with considerable difficulty brought into the wound; this was punctured and the gaseous contents were allowed to escape; the difficulty experienced in bringing the gut into the wound was found to be due to adhesions between the coils of the intestine. On drawing the gut out of the wound and examining it it was found to be a volvulus of the large intestine (sigmoid flexure which was at least 3 feet long), to which was attached a very long mesocolon and many adhesions which were evidently of long standing, as was borne out by the history of the patient. The adhesions were broken down and the volvulus was reduced. Before the wound was sewn up the sigmoid flexure was attached by two sutures to the abdominal wall, one at the upper part of the wound and one at the lower, the object being to prevent a recurrence of the volvulus. With the exception of slight thrombosis in the left leg the patient made an uninterrupted recovery.

Remarks by Mr. ALLINGHAM.—From the condition found at the operation—viz., old adhesions at the seat of the twist of the gut—I am disposed to think that the volvulus was always present and only gave rise to symptoms when the part contained within the volvulus became distended with flatus and so caused the attacks which the patient had complained of for so many years. In the last attack, however, the distension of the gut became so great that the muscular coat of the bowel became paralysed from over distension. Since the operation there has been no return of the old symptoms. So that one may conclude that the sutures which were put into the gut to secure it to the upper and lower part of the wound have prevented the enormously long sigmoid flexure from twisting on itself again and so re-forming the volvulus.

Note by Dr. BRIDGES.—It is now over 12 months since the operation was performed and the patient has had no return of his old symptoms. The bowels act regularly without medicine and he expresses himself as never having felt so well before.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF SEVERE UTERINE HÆMORRHAGE TREATED BY IODIPIN.

BY GEORGE E. KEITH, M.B., C.M. EDIN.,
LATE ASSISTANT TO PROFESSOR OF CLINICAL SURGERY, ROYAL INFIRMARY, EDINBURGH.

THE patient was a single woman, aged 49 years, who had been suffering from menorrhagia and metrorrhagia for some years. Up to the age of 43 years she was quite regular and the amount of loss was normal. About six years ago she noticed that the flow began to last longer and that she lost more than formerly. This gradually got worse until two years ago, when she sought advice from various medical men and hospitals.

I saw the patient first in consultation with my sister, Dr. Gertrude Keith, on Feb. 18th, 1903, the period having ceased the day before. The hæmorrhage had become so severe and constant that the patient had had to give up her occupation and, indeed, work of any kind, the slightest exertion not only increasing the hæmorrhage but bringing on faintness and intense breathlessness. These symptoms had been going on for some months. She was fit for nothing and if she even sat with her legs hanging down she became breathless. She stated that she had been treated at a London hospital for the last 14 months with ergot and other drugs and, though she had taken the medicines regularly, the symptoms had continuously increased.

The menstrual history for the last 12 months was as follows. She had been twice free from hæmorrhage for 14 days and once for 11 days, but beyond that the longest interval had been five days. Her general condition was certainly very bad, dyspepsia, constipation, swollen ankles, dilatation of the heart, and all the signs of extreme anæmia being present. On examination the cervix was found to be large and hard while the fundus was heavy and lying backwards. After washing the skin of the outside of the thigh with bichloride of mercury solution I injected one drachm of the 25 per cent. solution of iodipin into the cellular tissue. This dose was repeated every second day till March 3rd when the flow came on. This was an interval of 15 days. During the first day she noticed no difference in the amount of the loss, and as it was still excessive I gave the iodipin every day until March 6th, when the period stopped. It had thus lasted for four and a half days, the shortest and best she had had for a great many months, as, with the exception of the first day, there had been very little loss. The general condition had now much improved and she was able to do a little light work in her home. After the period was over the iodipin was again given every second day from the 7th to the 20th, when it was given every day as the patient felt that the period was coming on; however, it did not. The second period after commencing this treatment began on March 31st, an interval of 24 days; it lasted four days and was normal in amount. Since April there has been only one period; this also was normal and lasted four days. On examining the patient in the middle of May I found the uterus to be smaller and softer and the cervix normal.

This case shows the benefit of iodipin in certain forms of uterine hæmorrhage and, though it is perhaps unfair to praise it on the strength of one case, the paper of Dr. J. A. Shaw-Mackenzie in THE LANCET of April 4th, p. 958, also goes to show the value of this drug. Here was this patient reduced to utter helplessness by uterine hæmorrhage; every known drug in such cases had been tried for at least 14 months, and instead of getting better she was rapidly getting worse and she had become an invalid and a burden to others. There was nothing before her but a life of misery until the menopause came, probably three or four years hence, or an operation of more or less severity. Should the operation have been resorted to, owing to her enfeebled condition, a long convalescence was before her. Instead of this convalescence, within a week of commencing the hypodermic treatment by iodipin she was better and long before it was finished she was able to resume her employment and had become a useful member of society again. This is a point that is too often ignored and the weary weeks and months necessary for convalescence are forgotten when a patient is hurried into an operation. The result we ought to strive for is the cure of the patient with as little mutilation as possible and in a way that will put her on her feet soonest.

So far I have not tried iodipin in any case of definite fibroid tumour but my brother (Mr. Skene Keith) is getting good results in several cases.

Charles-street, W.

EMBOLISM IN ACUTE RHEUMATISM.

BY A. BROWNLIE, M.B., CH.B.

ON March 16th I was called to see a boy, aged eight years, whom I found suffering from well-marked symptoms of acute rheumatism with endocarditis. This was his first attack. There was also considerable broncho-pneumonia of both lungs. At the apex and in the axilla a well-marked systolic murmur was heard. Pericarditis did not develop during the course of the illness. He had always enjoyed good health previously. On the 24th I found him in the following condition which, his mother informed me, came on quite suddenly during the night. There was complete right hemiplegia with aphasia, the right side of the face, arm, and leg being involved. The upper branches of the facial nerve were not affected as the orbicularis palpebrarum and frontalis muscles were intact, this fact clearly pointing to a supranuclear lesion. It was also noted that the voluntary movements of the face were more impaired than the emotional. Electrical tests were not applicable. The hypoglossal nerve was also involved, the patient being unable to put out the tongue straight, but it deviated toward the paralysed side. The arm was more completely

paralysed than the leg. The thoracic and abdominal muscles were not involved. Hemianæsthesia was present and was more marked in the arm. The deep reflexes were increased in the arm and leg, ankle clonus being well marked.

With the exception of some congestion at the bases of the lungs the patient's general condition considerably improved up to May 5th, when symptoms of cardiac failure presented themselves, cyanosis being a prominent feature for two days before death which occurred on the 9th. The ultimate cause of death was evidently asthenia. There was no improvement in the hemiplegia and aphasia during the illness. No secondary contractions developed. Unfortunately, I was unable to obtain a necropsy.

Apparently, the case was one of embolism of the left middle cerebral artery with softening of the parts supplied by it, including the posterior part of the internal capsule. The case is interesting as, according to an eminent authority, embolism is rare in the acute endocarditis of rheumatism.

Lydney.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

ST. GEORGE'S HOSPITAL.

A CASE OF SIMULTANEOUS AMPUTATION OF BOTH LEGS; RECOVERY.

(Under the care of Mr. G. R. TURNER.)

FOR the notes of the case we are indebted to Mr. Lawrence Jones.

A man, aged 35 years, was picked up unconscious on the railway line on Feb. 3rd, 1902, and was admitted into St. George's Hospital under the care of Mr. G. R. Turner. On admission the left leg was found to be completely severed from the trunk at the centre of the calf and the right leg to be hanging by the peronei tendons and divided at a rather lower level. The only other injury was a small scalp wound. He was very much collapsed and had evidently lost much blood; the pulse was almost imperceptible, beating 150 to the minute, and the surface of the body was cold and sweating profusely.

The patient was taken to the operating theatre without delay and after a rectal injection of saline solution and brandy and the administration of 10 minims of liquor strychninæ subcutaneously, gas and ether were given and both legs were amputated simultaneously, the left by Mr. Turner and the right by Mr. Jones. The condition of the man was so critical that very little time was lost in rendering the skin aseptic. On the right side Stephen Smith's method through the knee-joint was employed, but on the left there was not sufficient sound skin for the flaps and the femur was divided just above the condyles. Hæmorrhage after removal of the tourniquet was very slight, the popliteal artery on each side being the only vessel that required a ligature. Large drainage-tubes were used and the patient was sent back to bed in a very collapsed condition. During the night slight improvement was shown under the free use of brandy and strychnine and saline enemata.

Progress was maintained until Feb. 5th when the patient vomited several times and complained of feeling hot. The temperature rose to 103° F. and the right stump began to look red and inflamed. In a few days there was a free discharge of pus on this side and a slough, of about the size of a half-crown, formed; on the left side there was also a small slough. The temperature gradually fell and the discharge lessened, the former reaching the normal on the 14th. The sloughs separated on March 4th and both wounds were soundly healed on April 1st, when the man was sent to a convalescent home. Unfortunately, it has been found impossible to trace him since his discharge from the home and so his later condition is unknown.

Remarks by Mr. JONES.—Recovery after amputation through both legs is a sufficiently rare event to warrant the publication of the above case. The main points about the case are, firstly, that the patient was subjected to as short an operation as possible, the amputations being performed simultaneously with this idea; and, secondly, the free use of stimulants before and after the operation. A good many cases of recovery after multiple amputations have been reported singly in THE LANCET; similar cases to the above have been published by Hewetson[1] and Stirling.[2] Successful cases of amputation through both legs below the knee-joint have been reported by Tyson,[3] Rundle,[4] O'Callaghan,[5] and Crompton.[6] But in the statistics of amputations in general the death-rate is high; thus out of 400 cases of amputation given by Dent and Bull[7] seven were double and of the lower extremities, death occurring in all; and even in statistics including amputations of the upper extremity the mortality was 16 out of 24 in the Glasgow results[8] and six out of 13 in those of the Newcastle Infirmary.[9]

SWANSEA HOSPITAL.

A CASE OF DOUBLE GANGRENE WITH DOUBLE AMPUTATION AT ONE YEAR AND NINE MONTHS.

(Under the care of Dr. R. C. ELSWORTH.)

FOR the notes of the case we are indebted to Dr. Alan H. Muir, house surgeon.

A female, aged one year and nine months, was admitted to the Swansea Hospital on Jan. 31st, 1903, as a case of gangrene exhibiting a line of demarcation. The child was very ill with a temperature of 102° F. The pulse-rate was 160, irregular, and hardly to be felt. The respirations were 48 and all the usual signs of septicæmia were present. The stench was appalling. The right foot hung on by the posterior tibial vessels and the left foot was in a similar condition. Higher up the legs the skin was broken in several places and there were a few bedsores. Under chloroform Dr. Elsworth amputated both limbs below the knee, obtaining flaps in the best way possible, whilst Dr. Muir compressed the femoral arteries and otherwise assisted. The patient stopped breathing after the one leg had been amputated and the other one was removed without further anæsthetic. Half an ounce of brandy was given per rectum. The temperature after operation fell to 97·4° and the patient was very collapsed. One minim of liquor strychninæ hypodermically and three ounces of saline solution per rectum were given every three hours for the first 24 hours. The child showed evidence of the severe toxæmic condition for some time. The temperature for the first eight days ranged from normal to 103°. The wounds healed by first intention and the little patient was discharged in a healthy state and became an inmate of Mr. Barnardo's Home. The condition seemed to have commenced as an acute epiphysitis.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

A Statistical Inquiry into the Prognosis and Curability of Epilepsy based upon the Results of Treatment.

A MEETING of this society was held on June 9th, Mr. ALFRED WILLETT, the President, being in the chair.

Dr. W. ALDREN TURNER read a paper on the above subject which will be found at p. 1650 of our present issue.

In the discussion which followed Dr. FLETCHER BEACH drew attention to the confirmation afforded by statistics to the general view that cases in which there is no hereditary history are the most likely to improve. The rule that the influence of heredity was more obvious when both parents

[1] THE LANCET, Dec. 27th, 1879, p. 942.
[2] THE LANCET, July 31st, 1886, p. 210.
[3] THE LANCET, April 17th, 1880, p. 603.
[4] THE LANCET, Dec. 25th, 1886, p. 1222.
[5] THE LANCET, March 1st, 1890, p. 465.
[6] Guy's Hospital Reports, 1881.
[7] Transactions of the Royal Medical and Chirurgical Society, 1890.
[8] THE LANCET, August 26th, 1882, p. 309.
[9] THE LANCET, April 13th, 1895, p. 923.

were epileptic was not limited to epilepsy but was a rule common to most hereditary diseases. The large proportion of confirmed cases which had commenced in early childhood was an interesting fact which awaited explanation. In regard to the duration of treatment after the last fit, there seemed to be a lengthening of the period during which it was considered desirable to maintain treatment before the disease could be regarded as cured.

Dr. G. E. SHUTTLEWORTH laid stress on the importance of statistical inquiry and gave particulars of a series of 340 cases of epilepsy in board school children, of whom 17 per cent. were fit to continue with the ordinary courses of instruction, 27·5 per cent. were able to profit by the modified instruction provided at special schools, and 40 per cent. required special institutional treatment. He referred to the popular opinion that epilepsy was favourably influenced by marriage and quoted a case which was strongly opposed to this view.

Dr. W. H. BLAKE had obtained good results in the treatment of epilepsy with sulpho-carbolate of sodium and believed that in many cases the stomach was the seat of peripheral irritation. In cases arising at puberty he relied on treatment with salicylate of sodium.

Dr. G. NEWTON PITT emphasised the two facts that the proportion of cures appeared to be no greater since the introduction of bromides than previously, and that cases in which treatment failed after having been carried out for one year were not likely to be arrested. He asked for some rule as to the administration of bromides in cases in which there had been a remission for two years or more.

Dr. H. BATTY SHAW drew attention to the similarity of Dr. Turner's statistics to those given by Sir William Gowers in regard to the frequency of a history of heredity in cases of epilepsy.

Dr. D. A. SHIRRES referred to the value of Babinski's sign as an indication of organic disease.

Dr. TURNER, in reply, stated that he regarded the convulsions as only one symptom of the disease. A more important element was the mental factor and it was on this that the prognosis depended more than on the convulsive factor. He was inclined to attribute the intractability of epilepsy in early childhood to the special mental conditions of that period. No general rule could be given as to the administration of bromides after a period of remission, but each case must be treated on its own merits. He considered that the statistics of the older observers should be regarded with caution in the absence of strict definition as to what constituted cure.

ISLINGTON MEDICAL SOCIETY.

The Medical Problems of Alcoholism.

A DISCUSSION on the Medical Problems of Alcoholism took place at the last meeting of this society for the session 1902–03, on May 18th.

Professor G. SIMS WOODHEAD having been asked to open the discussion from a physiological and pathological standpoint, said that he was almost afraid to come before them with a tale that he had been telling so constantly for some time past. As, however, the discussion was to be a very general one it might perhaps be as well to have a few statements and suggestions which might serve as direction posts to indicate a possible line of discussion. It must be remembered that he approached the question from the point of view of a total abstainer—a convinced "teetotaler" if they liked—and therefore that he held stronger views on the subject of alcoholism than did many of his friends. He observed that in Germany and Switzerland, where men were now making a scientific study of the alcohol question, the physiologists, alienists, and some of their hygienists were also becoming convinced abstainers. He pointed out many experiments on the action of fairly strong alcohol on the protoplasm of plants and lower animals. There could be little doubt that the functions of such protoplasm were seriously interfered with and that ultimately, if the action were continued, marked degenerative changes were inevitably produced. It had long been suspected and even recognised that alcohol probably acting as a protoplasmic poison was in some way or other responsible for the fibroid condition met with in cirrhosis of the liver and more recently the association of fatty changes in the liver with the exhibition of large and continuous doses of alcohol had come to be looked upon as a commonplace of pathology. He should, however, leave these conditions as associated with the liver and see if they could not satisfy themselves that alcohol as a poison had a far more wide-reaching effect. Alcohol as a poison appeared to act in two ways. First it acted upon the protoplasm of the different cells of the body, causing in many cases a rapid degeneration, the evidence of which was manifested by the presence of fat in the cells of various organs, by cloudy swelling, by the disappearance of Nissl's granules, or by the stunting and clubbing of the twiglets on the long processes of the nerve cells and the moniliform thickening of these processes. At the same time the poison acting on the connective-tissue cells in the immediate neighbourhood, all much less highly developed and therefore more readily stimulated to proliferation, caused an increase of these cells near the seat of degeneration. In very chronic cases these connective-tissue changes appeared to be primary, but he thought that although they were the changes that were most prominent and permanent, they were in most cases quite secondary to, and dependent to some extent upon, the more important degenerative changes first mentioned. This might, however, be a primary change especially when occurring in the walls of the blood-vessels or in tissues richly supplied with lymphatics. In connexion with changes in this latter position he pointed out that alcohol not only impaired function in one direction, it had a direct effect in bringing about a retention of the waste products of the body in the tissues themselves and in the fluids in which these tissues were bathed. These waste products being of a highly poisonous nature acted along with the alcohol in increasing the extent and severity of the degenerative and irritant processes of which mention had been made. Reference was made to the experiments carried out in connexion with the study of the effect of alcohol in preventing the acquisition of a state of immunity against disease-producing micro-organisms and their toxins. Professor Woodhead thought that they were only on the threshold of this subject as yet, but sufficient information had been acquired to justify the hope that still more would ere long be garnered. The popular notion that the effects of large doses of alcohol, especially when repeated, could be slept off in a night was absolutely erroneous, as was also an idea that it was a valuable food. Its action as a poison was far more important than its action as a food, and although a spurt had been made in bringing up evidence as to the food value of alcohol it was daily becoming more evident that its rôle was pathogenic rather than nutritive. In conclusion Professor Woodhead quoted the experiments of Kurz and Kraepelin[1] to show that the foundations of chronic alcoholism might be laid sooner than is generally supposed. They say: "A single dose of 80 grammes of alcohol (2⅔ ounces) does not pass off quickly and perfectly but leaves behind an after-effect which lasts more than 24 hours. If this dose is repeated in 24 hours a gradual increase of effect is produced which we must designate as the commencement of chronic alcoholism and this is already very evident after 12 days' action by a depreciation of faculty to the extent of 25–40 per cent."

Dr. J. G. GLOVER said that of all questions affecting the health of nations and patients few were more important than that of the careful and intelligent use of alcohol. He did not pretend to give any demonstration of the truth of his opinions. They had only the value of impressions produced on a practitioner with an average open mind who had lived long enough to have seen the profession swayed with violent waves of opinion in favour of different methods of treatment and who remembered, in respect of this subject, great discussions and great variations of practice and who had made it more or less an anxious study. He had been much impressed with the views of medical men entitled to be leaders. Sir William Jenner once said to him—Sir William Jenner was not a teetotaler—"I have come to the conclusion that if a man has to work hard he must eat moderately and drink nothing." The view of his friend and mine, the late Dr. Edmund A. Parkes, reached after careful experiments, was that only an extremely small amount of alcohol could be dealt with or used by the system. The burden of the testimony of their leaders before the Lords' Committee—and it could not be gainsaid—was in favour of extreme moderation and they

[1] British Medical Temperance Review, May, 1903, p. 159.

agreed in warning the public that quantities which the "man in the street" might consider moderate often led to inconvenient and pathological results. But the quantities consumed were enormous and showed no satisfactory signs of decrease, though large sections of the community took none and others little; so that there must be large portions of the community who were actually soaked and saturated with alcohol. There was a very general consensus of opinion in the profession that alcohol was not necessary for the young, that in their diet it was misplaced, and that even in acute depressing diseases they needed none or little. On this last point, what made a great impression upon him (Dr. Glover) was the teaching of Sir William (then Dr.) Gairdner in 1864 as to the treatment of typhus fever in Glasgow with little or no alcohol, showing that he treated 189 cases below 16 years of age, of which only one patient died, a child aged six years, who was admitted into the hospital in a moribund condition. Dr. Gairdner reckoned that if these 189 cases had been treated on Dr. R. B. Todd's system instead of one death—and that in a moribund child—there would have been from 30 to 35 deaths. These cases were treated without stimulants except in the rarest cases. Of 406 patients admitted above the age of 16 years 17·2 per cent. died. Dr. Todd's mortality from typhus fever in London with huge quantities of stimulants was, according to Dr. Murchison, 25 per cent. In recent days the value of alcohol in the treatment of cardiac failure, in fever, and in other states had been much discussed. Dr. H. D. Rolleston, in an address to the North London Medico-Chirurgical Society, had spoken as follows: "At one time I regarded alcohol as *the* remedy for failing heart in typhoid fever and considered that it should be given with no niggardly hand in bad cases, but gradually, partly from observation of cases and partly from experience of others, especially from consideration of facts insisted on by Dr. Graham Steell—that cardiac dilatation is frequently in the otherwise healthy due to alcoholic excess—I have come to distrust the value of alcohol in large quantities in typhoid fever. In that disease the myocardium is already suffering from the toxic action of one poison and would therefore be more likely to suffer from the effects of alcohol. ..... I am inclined to rely on other means and chiefly on the hypodermic injection of strychnine." Dr. Glover had a strong conviction that as life advanced in those who had been in the habit of taking stimulants moderately the quantity should be decreased rather than increased. The prolongation of life depended much on the glands and the blood-vessels and alcohol was not good for the liver and the kidneys. It tended to destroy fine special cells, whether of the liver, the kidneys, or the brain, and to replace them by fibrous tissue; it senilised, it favoured degeneration, and impaired both the liver and kidneys, so that the system could not dispose of alcohol as it could when those glands were younger. The principle "*vinum lac senum*" was a most doubtful one, even when the wine took the form of whisky, according to the prevailing fashion. Here Dr. Glover wished to record his belief that the notion that whisky was a benign and innocent form of alcohol which young and old, healthy and gouty, might indulge in with impunity was one of the greatest delusions of this generation, and nothing was more striking than the hold that this delusion had of the more educated classes. He was told by one of his most intelligent patients, himself a commercial traveller of high character and great and long experience, that "commercial travellers drink more whisky than they ever did; they take it in the morning and at all times; and they all say that their doctors told them they might. Men used to take sherry with lunch and dinner and port after; now they take whisky instead." On the need for diminishing the amount of alcohol taken as age advances he was glad to quote the opinion of so great and unprejudiced an authority as the late Sir William Roberts: "Sometimes the indications of this natural tendency—i.e., to diminish the proportion of stimulants taken as age creeps on and the nutritive processes decline in elasticity and power—are neglected or resisted by the unwary; they imagine that the quantity of stimulants which they tolerated with impunity, or even took with advantage, during the vigour of manhood cannot hurt them in later life. This, I believe, is an error, the commission of which tends to accelerate senile decay and to provoke fatally tending organic changes in the kidneys, liver, and arterial system." As a curious illustration of the defective intelligence of educated people in this matter he was often struck with the levity with which they might see gentlemen, even young gentlemen, enter a railway bar and toss off a glass of whisky, sometimes very little diluted and sometimes, he feared, raw. Even in Scotland, with all its centuries of education and its high religiousness, there was still little or no decline in the consumption of whisky; and there was some years back, if there was not still, a club known as the "Ten-tumbler Club," the members of which included some distinguished Scots. He had seen the *Times* recently quoted as to criminal statistics in Scotland: "Remarkable is the increase of crimes against property without violence, of malicious injury to property, and of drunkenness and disorder." The special committee on mental cases of the parish of Glasgow lately reported as follows: "The committee views with concern the fact that, of 565 admissions to the two asylums as insane and 213 to the poorhouse as cases of incipient insanity during the 12 months, no fewer than 259 or 33 per cent. have become chargeable to the parish through alcoholic indulgence. ..... In the large majority of cases the conditions and surroundings were good, and the earnings in 19 typical cases were from 19*s.* to 60*s.* per week. It is beyond question, further, that a large number of the insane sent to the asylums in previous years, and still inmates thereof, are cases of the same nature." Late reports of Dr. T. S. Clouston, of the Royal Asylum, Edinburgh, equally show the increasing influence of alcohol in the causation of insanity. Recent revelations as to physical defects and degeneration in the large English town populations as revealed by the tests applied to recruits were very painful reading. In the Manchester district only 1200 out of 11,000 men offering themselves for enlistment during the recent war were found up to the standard of what a soldier ought to be. In a report of Colonel Bennett, the inspector-general of recruiting, it was said that 75,750 men were medically examined last year. As many as 22,286, or 29·04 per cent., were rejected for various ailments or want of physical development. Dr. Glover associated this physical deterioration largely with the excessive use of alcohol. It was not only in itself a powerful cause of deterioration, but its cost, amounting, as far as he could make out, to about one-fourth of the wages of a working-man, affected gravely the expenditure available for his own nourishment and that of his family. If this expenditure were reduced even by two-thirds it would represent many quarts of milk weekly or an extra room to live in. Too much was made of mere legislation for the treatment of habitual drunkards. This was beginning at the wrong end. They must begin with sounder views of diet for children, for young people, for patients, for servants, and for families generally. In America this was a subject of teaching in the schools, and so it should be everywhere with us if more intelligence was to be brought to reduce the amount of alcohol consumed by the nation, which so retarded social and physical improvement. There were some diseases in which alcohol, according to popular views, was beneficial—e.g., consumption. In a very interesting article Dr. W. H. Dickinson[2] showed conclusively from the clinical and pathological records of St. George's Hospital that the free use of alcohol by persons in the liquor trade did not prevent phthisis, as even so acute an observer as Dr. Walshe thought, but promoted it. As an instance of the old ideas in the treatment of carbuncle it was a common practice to push the administration of stimulants, especially port wine. He (Dr. Glover) had long been persuaded that such treatment was a great mistake. The disease was common in oldish people, often those who had lived well and whose organs and blood-vessels were older than their years, sometimes having sugar or albumin in the urine. They were easily overpowered with stimulants and were made worse. Such cases were far better treated with rational diet and local antiseptic dressings with or without incisions. The treatment of fevers by Sir William Gairdner he had already referred to. Perhaps the malpractice and folly of the indiscriminate prescribing of stimulants could be best understood by considering for a few seconds the careless use of the word "weakness" by the public and too often sanctioned by the profession. Debility or weakness might mean anything; it meant actually nothing. But it was the foundation upon which much of the abuse of stimulants actually rested. The facile diagnosis of "only weakness" usually covered ignorance or carelessness. A patient came to them complaining of feeling

[2] Occasional Papers, 1865 to 1898.

weak. He had, perhaps, been taking on his own account what he called "strengthening" things—"nourishing stout," port wine, or rump steaks. All the time he had probably some considerable disorder—catarrh, some error of metabolism, or some block of digestion or assimilation. His tongue might be furred or his urine loaded with lithates or slightly albuminous, or he might have touches of rheumatism or gout. The correction of these states was the obvious treatment and all the so-called tonics in the Pharmacopœia with the soundest whisky and the most nourishing stout were so many delusions to which the intelligent practitioner should be no party. That was the real tonic treatment which aimed at the correction of latent or obvious errors in the working of the system or of its individual organs. Alcohol might easily aggravate such evils. Dr. Glover then spoke of beer alcoholism in Germany and in England and of intemperance of women. In Islington in the last ten years there had died from cirrhosis of the liver 286 men and 300 women. Dr. Glover ended by saying that he was not a teetotaler and that he did not think that teetotalism was a practical doctrine for a northern nation. Certainly alcohol could not be dispensed with as a remedy, or by some persons as a part of diet. All the same, he regarded the present consumption of it as simply disastrous and discreditable to the public intelligence. All the great European nations were showing a wise anxiety on this subject. On the whole, he had a low opinion of alcohol in any but the lightest form and quantity and thought that there could be no doubt that recent research and careful clinical observation pointed to the wisdom of greatly reducing its consumption with food, never using it casually or carelessly and prescribing it with more precision and with a high sense of medical responsibility. The profession of France, Germany, and Russia were exercised much on this problem and that of Great Britain would not be behindhand.

Dr. ALEXANDER MORISON was glad that Professor Woodhead did not exclude a therapeutic use for alcohol from consideration. The effect of alcohol on the higher cells of the body was shared by other agencies of admitted therapeutic value as strychnia, opium, and belladonna. The therapeutic use of drugs was frequently and admittedly an intoxication with them, or, to use the language of the clinician, it was generally necessary to induce in some degree the physiological action of a drug before we could hope to influence the organism beneficially. Did the argument apply to alcohol in health or in disease? They did not use drugs in health or endeavour to induce in some degree their physiological action when a person was well. But drugs were not food, which alcohol in some measure was. Still they could not beneficially live on alcohol and it might be stated generally that a healthy man needed no alcohol even when fatigued, for the fatigue of a healthy man would soon pass off with rest, ordinary food, and natural sleep. A man who led a strenuous life and was free from organic disease might, however, be fatigued to that extent at which we had apostolic authority for believing that a little wine might be good for the stomach's sake, for in such circumstances it might aid digestion and relieve vascular tension. The danger of this was that moderation was not widespread. There was risk of excess fostered in many ways by social customs and by commercial interests. Unfortunately the wise counsels of the physician were not likely to be taken seriously by alcoholic Philistines. It was not as a stimulant to the digestive process that alcohol found its most serious application in medicine. It was as seriously combating threatened cardiac failure that alcohol found its most useful applications in medicine, in serious and sudden emergencies, in the prolonged strain of exhausting diseases, and in the shock, either of mental distress or of severe pain either in the heart itself or in some other region reacting on the heart. In such circumstances half an ounce of brandy, undiluted or little diluted, was most useful, acting directly upon the nervous regulative apparatus of the heart. Dr. Morison showed by slides the rich endowment of the heart with peripheral nerves. He thought that they should beware, lest for political, economic, or philanthropic reasons they held their hand in the practical field of rational therapeutics.

Dr. J. L. HEWER remarked that it was interesting to hear that the early nerve changes as demonstrated by the microscope could be absolutely recovered from, but he would like to know the definite point at which recovery was impossible. They must all know the patient who took nearly a bottle of whisky a day with apparent impunity. A great deal must depend upon individual idiosyncrasy.

Dr. J. FORD ANDERSON said that he would like to know if the moderate drinkers—those who like himself had been in the habit of taking a glass of wine with their meals—would suffer the degeneration of cells which Professor Woodhead had mentioned. He understood that most of the observations on alcoholic poisoning in man had been made in pronounced cases of the alcoholic habit, and if this were true it would be misleading. Dr. Anderson further remarked on the almost universal use of alcohol by nations and on the general distribution of alcohol in the vegetable kingdom and thought that people could not avoid partaking of alcohol sooner or later if they used as a diet the fruits of the earth. He cited a case in illustration where fermenting grapes caught fire when a lighted match was applied. He regarded alcohol in carefully regulated doses as a food and as a producer of force in the malnutrition and malassimilation of chronic disease and in the exhaustion of acute diseases. When alcohol was administered in such cases it not only produced direct stimulation but it underwent combustion and the tissues of the patient were spared, and he cited as an example cases of pronounced anæmia where iron and feeding seemed to fail until port wine or an equivalent was ordered. Alcohol also in health generated energy when to use the French proverb, "Il n'y a que le premier pas qui coûte"; when the work was really beyond their strength but yet must be done a glass of wine often overcame the initial difficulty of starting and the vital powers would carry them through. This did not seem, however, to be true when the muscles were tired, muscular fatigue being more relieved by tea than by alcohol. Dr. Anderson also expressed disapproval of the prevailing laxity in ordering spirits without specifying the quantity, especially to young people who were likely to end by taking more than the physiological dose.

Mr. T. D. JAGO said that he was a teetotaler but he was quite alive to the value of alcohol, especially in obstetric and other emergencies.

Professor WOODHEAD by way of reply to Dr. Morison's point that alcohol in injuring the protoplasm only did what strychnia, opium, and other drugs, confessedly useful medicines, did, agreed, but he pointed out that whereas they were prescribed only as drugs in precise quantities and for a limited time alcohol was used loosely and after the occasion for prescribing it had passed.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

Adjourned Discussion on (1) the Care and Treatment of Persons of Unsound Mind in Private Houses and Nursing Homes, and (2) Lunacy and the Law.

A MEETING of this association was held on May 15th under the presidency of Dr. JOSEPH WIGLESWORTH.

Dr. HENRY RAYNER resumed the adjourned discussion of two papers read at the meeting held at Derby County Asylum on Feb. 12th—namely: (1) the Care and Treatment of Persons of Unsound Mind in Private Houses and Nursing Homes, by Dr. Ernest W. White;[1] and (2) Lunacy and the Law, by Dr. T. Outterson Wood.[2] Dr. Rayner said that the first point was the desirability of having early care of mental cases, and the second point was that such care should be efficient. The legalisation of the treatment of early mental cases might be regarded as fairly settled and it was to be hoped that the Lord Chancellor would succeed with his Bill at the third attempt. Dr. Rayner, however, feared that the privilege might be abused unless some limitation were placed upon its use, though the basis of such limitation was matter for discussion. The persons most suitable to take care of early cases were those who had had considerable asylum experience; the next best persons were old asylum officers; and after them ladies who originally had experience in nursing their own friends and then had taken to nursing work. On the other hand, general nurses were too stereotyped in their habits to be successful with mental cases. Persons without experience should never be allowed to have the care of those difficult cases. He had seen mental cases treated with care and kindness but yet to their detriment;

[1] THE LANCET, Feb. 14th, 1903, p. 427.
[2] THE LANCET, Feb. 28th, 1903, p. 577.

sometimes, again, they were allowed to be wet and dirty and to masturbate to any extent. With regard to the limitations referred to, it was possible that the Commissioners in Lunacy might be inclined to grant licences to persons who would take charge of early mental cases, but his own feeling was that that association, which had done so much in the matter of training attendants at asylums, might set to work, by examination, and perhaps by teaching, to furnish the public with a trustworthy body of people to have charge of incipient cases of insanity.

Dr. L. A. WEATHERLEY (Bath) said that the first 14 years of his professional life were devoted largely to the care of the insane in private dwellings, and in 1880 he read a paper, which was discussed at two meetings of the association, on the same question. He published the paper as a book and dedicated it to the late Earl of Shaftesbury. In that book he proposed to make the system of single treatment of the insane a definite legalised system—i.e., to eliminate those who, simply for payment, took patients into their houses when they had no special knowledge of mental disease. He advocated the issuing of licences to persons who should have such care, not by quarter-sessional districts, but by petty-sessional districts, as the latter would know more of the people in their particular area. In a letter written to him the late Earl of Shaftesbury said that he did not object to the principle of placing the insane in private care, but were any relative of his afflicted with insanity he would place him or her in a house along with many others in preference to any retreat for a single patient. Almost all reformers in lunacy matters were so carried away by the claims of the patient that they totally forgot the claims of the public who had a right to security from danger and annoyance. Sir William R. Gowers,[3] in his paper read before the association, seemed to want to make it possible for people to be placed under the care of almost anyone, so that what was called the stigma of insanity should not rest upon the patient and his family; but Sir William Gowers probably forgot that the majority of those even who were sent to private houses were not sent with their free will, but against it. A great deal depended on the kind of person with whom the patients were to be placed. He (the speaker) thought that the voluntary boarder system ought also to be very widely extended and that each asylum should have a separate department and dietary for private patients.

Mr. J. F. BRISCOE recommended the passing of a motion stating that the association disapproved of the system now practised with regard to single care and private nursing homes, and suggesting to the authorities some stringent methods with regard to the better regulation of single care cases, nursing homes, and other places for persons of unsound mind.

Dr. DAVID BOWER reminded the members that the association had done all that it could to get the Scotch provision inserted into the new Bill. But, on the other hand, it was very necessary not to make the treatment of lunacy absolutely a matter of free trade; and it was desirable to have such precautions as those laid down in the two papers under debate.

Dr. G. SAVAGE said that a large proportion of friends would not have their relatives certified, and until, by some sort of police action, they could be forced against their will, something must be done in the way of recognising single homes. He agreed that there should be a kind of notification of patients and of homes As an illustration of the qualifications of some of the persons who wished to have patients in their houses he mentioned that a parson's wife had written to say that unless he could send a patient who could pay £1000 a year and would cause no trouble her husband would have to give up his carriage as he had met with heavy financial losses. In some of the cases in which application had been made to him by medical men to have cases for private care the men were well qualified but the houses were unfit for various reasons, such as being semi-detached and having no garden. In another case the relatives said that a medical man was no good—they would have a nurse and run the risk. They did so and the patient committed suicide.

Dr. H. F. H. NEWINGTON (Ticehurst) said that Dr. White's paper might be regarded as an answer to that of Sir William Gowers who seemed to want to tear down the provisions of the lunacy law too much and to allow of the treatment of excessive numbers of patients in private houses. In some cases, of course, good results were more likely to follow by placing patients in good hands under private care than in public institutions, but Sir William Gowers went much further than that.

Dr. DOUGLAS (London), Dr. F. W. EDRIDGE-GREEN (Hendon), Dr. A. J. ALLIOTT, Dr. HENRY FORBES WINSLOW, and Dr. W. LLOYD ANDRIEZEN also took part in the discussion, after which Dr. WHITE and Dr. WOOD replied to the points raised by the various speakers.

[3] THE LANCET, Nov. 2nd, 1902, p. 1369.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Ichthyosis.—Roentgen Rays in the Diagnosis of Lung Disease.—The Nauheim Bath.—Sialogogues.

A MEETING of this society was held on June 3rd, Dr. C. E. UNDERHILL, Vice-President, being in the chair.

Dr. D. CHALMERS WATSON showed a case of Ichthyosis in a girl who had benefited considerably by treatment. In December she presented an entire absence of hair over the body, while that on the head was scanty. At the present time hair was growing on its normal situations on the arms and on other parts and that of the head was luxuriant. Dr. Watson also exhibited microscope slides showing the Histological Appearances of the Skin of a Seventh-month Fœtus—a sister of the above-mentioned case of ichthyosis. He also exhibited a case of Rheumatoid Arthritis with several interesting features, as pigmentation, tremors, cachexia, and tender deep-seated areas in the muscles, chiefly of the neck.

Dr. D. LAWSON (Nordrach-on-Dee) read a paper on Roentgen Rays in the Diagnosis of Lung Disease and illustrated it with a large number of lantern slides. The paper will shortly appear in full in THE LANCET.—In the discussion which followed Dr. ALEXANDER JAMES, Dr. F. GARDINER, Dr. W. ALLAN JAMIESON, Dr. G. LOVELL GULLAND, Dr. D. C. A. MCALLUM, and Dr. NORMAN WALKER took part.

Dr. A. D. WEBSTER contributed a paper on the Saline Effervescing Bath (Nauheim Bath) and Resisted Exercises in the Treatment of some Heart Cases. He said that the special treatment was indicated: (1) in enfeebled states of the heart such as might be due to physical strain, to psychical stress or worry, and to toxins; and (2) in some cases of valvular disease. He discussed the effects of the special bath as regards the temperature of the water, the dissolved salts, and the carbonic acid gas, comparing them with the cardiac remedies—arsenic, strychnine, the nitrites, and digitalis. He said that the temperature of the bath in its action on the heart corresponded to digitalis. The salts in their action on the heart and skin corresponded to arsenic and in their action on the vessels corresponded to the nitrites. The carbonic acid gas by its stimulation of the sensory nerves corresponded to strychnine. The bath acted as a powerful stimulant, both thermic and mechanical, with special influence on the vagi. The general effects of a course of these baths were a sense of well-being, good sleep, improved appetite, increased warmth of the skin, and increase of the body-weight.

Dr. W. G. AITCHISON ROBERTSON read a paper on Sialogogues and their Therapeutic Employment. It was well known that certain substances, and especially those which were pungent to the taste when chewed, caused a rapid flow of a watery fluid into the mouth. Portions of each of the substances investigated were masticated for a period of 30 minutes, the amount of saliva being collected and measured every two minutes. In this way it was noted whether the flow was constant and uniform or whether it varied in its amount, alkalinity, or starch-converting power. The alkalinity of the saliva was estimated in each case by means of very sensitive litmus paper. The starch-converting power was estimated by allowing a measured quantity of the saliva secreted under the stimulation of each agent to act upon a measured quantity of starch mucilage for a definite period. At the end of this interval the amount of sugar produced and the degree of dextrinisation of the starch which remained were determined. It was found that rhubarb, mustard, pimenta, cinnamon, and marsh-mallow called forth but a relatively small increase in the salivary flow, whilst such agents as calumba, orange peel, gentian, cinchona, and cu-paria induced a much more copious secretion. Heading the list were pyrethrum, colchicum, ginger, horse-radish, and black

pepper. The alkalinity of the saliva was found to vary within such small limits that for practical purposes it might be said to have been uniform. As regarded the starch-converting power of the saliva it was found that catechu, rhubarb, alum, and borax entirely inhibited the action of the salivary ferment. On the other hand, most of the drugs which induced a copious flow of saliva exerted what might be termed a normal sialocinetic action—that was, that the saliva secreted under their stimulation acted in a normal way on starch mucilage. For practical purposes it might be considered that the useful sialocinetic agents were confined to the vegetable kingdom. Many individuals found difficulty in the digestion of starchy food and such cases could often be benefited by slow mastication and proper insalivation of the amylaceous constituents of the meals. Dyspeptics were also advised after meals to chew for ten minutes or so one or other of the more potent and palatable sialogogues. In hyperchlorhydria the onset of pain was usually delayed until some time after partaking of a meal. It was, therefore, desirable to secure the digestion of the amylaceous constituents of the meal before the free acidity checked proteolysis. This could be done by increasing the flow of normal saliva, which, also, by its alkalinity delayed the presence of free acid. In many cases of feeble gastric digestion the fault was due merely to a diminished activity in the gastric juice, both hydrochloric acid and pepsin being present in less than their normal amounts. When saliva was introduced into such a stomach it had the effect of stimulating a more copious as well as a stronger secretion. Thus an increase in the saliva which was introduced caused a larger amount of gastric fluid to be secreted. In many such cases Dr. Robertson had found that great benefit was produced by a stimulation of the salivary secretion by means of palatable vegetable sialogogues, such as ginger, gentian, peppercorns, or cusparia. In certain cases other means of treatment must first be employed, as, for example, multiple fermentations in the stomach must be treated by lavage and the exhibition of antiseptic agents, such as salol, salicylate of bismuth, or naphthol.—Dr. UNDERHILL, Dr. H. M. CHURCH, Dr. G. KEPPIE PATERSON, Dr. WEBSTER, and Dr. W. CRAIG took part in the discussion.

CLINICAL SOCIETY OF MANCHESTER.—A meeting of this society was held on May 20th, Dr. T. A. Helme, the President, being in the chair.—Mr. J. E. Platt made a communication upon Bronchocele, especially from the point of view of treatment. He briefly reviewed the various forms of chronic bronchocele and referred to a few points in their etiology, pathology, and symptomatology. In cases of parenchymatous bronchocele he had found considerable benefit from the administration of iodine and potassium iodide internally, but these and all other internal remedies were practically useless in adenomatous cases. In the latter the only effective treatment was operation with enucleation of the tumour. The general parenchymatous enlargement of the gland which often accompanied adenoma usually subsided after the removal of the adenoma. In simple parenchymatous cases which resisted medicinal treatment operative measures should consist in partial excision of the gland or scooping out of its interior. Mr. Platt also referred to the symptoms of absorption of thyroid secretion which sometimes occurred after operation and showed a number of charts illustrating special observations upon this point.—Dr. Arnold W. W. Lea read a paper on Acute Recurrent Hydronephrosis and related the notes of four cases treated by operation. The condition was characterised by recurrent attacks of acute abdominal pain with severe constitutional disturbance and associated with rapid swelling of the kidney and temporary hydronephrosis. It may be found along with mobile kidney, but extreme mobility of the kidney often existed without any evidence of hydronephrosis. Mr. W. Bruce Clarke in 1893 described this condition as "acute renal dislocation" and considered that the kidney slipped downwards beyond the costal margin. In the cases described by Dr. Lea the reduction of the kidney even under anæsthesia was impossible owing to the great increase in the size of the organ. The cause of this condition was temporary ureteral obstruction. Slight degrees of ureteral obstruction were common in mobile kidney, producing some hydronephrosis, but in the acute cases an additional element was introduced—viz., sudden kinking or torsion of the ureter. Valvular folds were frequently present in the upper part of the ureter near the renal pelvis. Sometimes also strictures occurred from adhesions, traction by bands, or more rarely by a calculus. Reference was made to an interesting paper by Barg of Paris,[1] who had examined the ureter and renal pelvis of a large number of newly born infants. The pelvis of the kidney showed great variation in size and shape, and the angle of insertion of the ureter might be vertical or almost horizontal. The form most liable to lead to hydronephrosis was a voluminous renal pelvis with the ureter entering at an acute angle. In these cases, which were rare, slight degrees of movement of the kidney, such as might be produced by sudden strain or effort, led to obstruction of the ureter and acute hydronephrosis. Other factors, such as congenital stenosis, valves, and twists, also conduced to it. The production of recurrent hydronephrosis was largely dependent on the congenital disposition of the ureter and renal pelvis. In these cases slight descent of the kidney, not recognisable clinically, might lead to acute ureteral obstruction. The symptoms might be very severe. In one case the attacks came on at frequent intervals without obvious cause and were accompanied by intestinal obstruction due to displacement of, or traction on, the colon. A distinct tendency existed for the attack to come on just before a menstrual period. This occurred in two cases and might suggest a pelvic cause for the symptoms. The attacks might last three or five days and then within a few hours the kidney returned to its normal size and all the symptoms disappeared. In the intervals the patients might be well but they were usually neurasthenic and had constant aching in the loin. The diagnosis was simple if a definite tumour could be felt, but in the earlier stages of ureteral obstruction with dilatation of the pelvis the symptoms might be very severe in the absence of any definite tumour. The treatment must be mainly surgical. The kidney must be exposed, and in the great majority of cases nephrorrhaphy effected a permanent cure. In slight cases it was unnecessary to drain the pelvis. If, however, the kidney was hydronephrotic the pelvis must be incised and a careful examination made of the upper end of the ureter. If no obstruction was found the pelvis might be sutured and the kidney fixed. Nephrorrhaphy was carried out by Dr. Lea in all the cases. In three the pelvis of the kidney was opened and in one case it was thought advisable to drain for a few days. In each instance a permanent cure was obtained. It was important not to delay operation too long, as otherwise the kidney might be irretrievably damaged. There was also a great tendency to the development of pyonephrosis in these cases, due to an ascending infection from the bladder or possibly secondary to adhesions forming between the colon and the perirenal tissues.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—The annual meeting and conference of this society took place on May 27th. The following gentlemen were elected as officers for the ensuing session:—President: Dr. J. H. Stowers. President-elect: Dr. H. Waldo. Vice-Presidents: Dr. P. S. Abraham, Dr. R. L. Bowles, Dr. James Galloway, Dr. A. J. Harrison, Dr. J. F. Payne, Dr. H. H. Phillips-Conn, and Dr. P. H. Pye-Smith. Treasurer: Dr. C. H. Thompson. Honorary secretaries: Mr. A. Shillitoe and Dr. W. B. Warde. Council: Dr. Wallace Beatty, Dr. H. A. G. Brooke, Sir Alfred Cooper, Dr. H. Radcliffe Crocker, Dr. A. Eddowes, Mr. Willmott H. Evans, Mr. W. T. Freeman, Dr. A. J. Hall, Dr. E. G. Graham Little, Mr. George Pernet, Mr. George W. Sequeira, and Dr. Edward Stainer.—Dr. William Thomas Corlett, professor of dermatology and syphilology, Western Reserve University, Cleveland, gave an address on the Present Epidemic of Small-pox throughout the United States, together with a short consideration of the different types of the disease, their recognition, and some of the influences of vaccination, illustrated by lantern slides. By way of introduction he called attention to the similarity in the methods employed in combating the disease both here and in America. To the great Sydenham they were indebted for placing at rest, he trusted for all time, the uncertainty which existed concerning the identity of certain affections—e.g., chicken-pox, measles, &c.—which presented, it must be acknowledged, certain fundamental characteristics which entitled them to be placed in a group by themselves—"the acute infectious exanthemata." He next spoke of the freedom from small-pox which the aborigines of the American continent enjoyed previously to its discovery by Columbus. The disease was carried to

[1] Revue de Chirurgie, February, 1902.

the island of San Domingo in one of the subsequent voyages, thence it spread to the mainland carrying consternation and death to the natives who, scattering far and wide, spread the new disease far into the interior. Small-pox was not unknown to the early settlers of New England and a few years after Jenner's great discovery in 1798 vaccination was practised in the infant republic of the New World. Attention was next called to the variability in severity of the different epidemics that from time to time had swept over the country, as well as to the various clinical types of the disease, the importance of which, the speaker thought, could not be too strongly emphasised. The epidemic of 1898 appeared, within a few months, in various States remote from each other. Thus in Boston and New York the disease assumed a virulent form and was from the first attended by a high mortality, while in Philadelphia, only about 100 miles away, it was so mild that the health authorities experienced difficulty in maintaining strict quarantine measures. In Ohio so mild was it that a correct diagnosis was not at first made, the disease being regarded as a severe form of varicella. Into Boston and New York small-pox was thought to have been introduced from Europe, and into Ohio from Cuba, where it was endemic, *viâ* the Southern States. A series of photographs, illustrating the various types of the disease, &c., was thrown on to the screen. Two factors, Dr. Corlett thought, should be taken into account in controlling or modifying small-pox: (1) vaccination; and (2) the as yet unknown condition of the variola virus itself. By vaccination small-pox might be stamped out of any community, as had been done in Germany. But it must be impressed on the laity that revaccination at least every ten years, or oftener during epidemics, alone insured complete immunity. As to the second factor, all they knew was that the epidemics varied greatly in severity, independently of the influence of vaccination. In the Cleveland epidemic the death-rate increased from about one-half of 1 per cent. for the first year to nearly 20 per cent. in the third and fourth years. The virus was supposed to have developed more virulent properties by successive transplantations. In conclusion Dr. Corlett spoke of the exclusion of the actinic rays of the solar spectrum in the course of treatment. The exclusion of daylight must be complete from the beginning of the eruption. To insure this Finsen recommended the suspension of a sensitised photographic plate in the room. The exclusion of the actinic rays in no way influenced the variola virus itself.—Dr. Harrison moved, and Dr. Radcliffe Crocker seconded, a very cordial vote of thanks to Dr. Corlett for the most interesting address which he had given to the society.

GLASGOW SOUTHERN MEDICAL SOCIETY. — A meeting of this society was held recently under the presidency of Dr. D. Macgilvray. Dr. Bruce gave a most interesting account of his experiences in South Africa during the war which was much appreciated. At the conclusion he was cordially thanked for his lecture.—Dr. G. H. Edington then showed:—1. An Appendix which had been removed from a Right Femoral Hernial Sac. The appendix was tightly grasped at the orifice of the crural canal and protruded one inch into the sac. The sac was distended with fluid and was of about the size of a Tangerine orange and contained no other viscus. The appendix was pulled down, ligatured, and cut away. The stump was touched with pure carbolic acid and returned into the abdomen. The canal was closed by one suture passing through Poupart's ligament and the pectineal fascia. The patient was a woman, multiparous, aged 50 years, and had no signs of strangulation, but she had complained of swelling in the groin, pain, and uneasiness. The swelling was irreducible and had no impulse on coughing. The duration of the illness was four days. She made an uninterrupted recovery. 2. A Sequestrum containing Temporary Molars and one Biscuspid Crown from the left upper jaw of a boy, aged six years, who had a severe attack of typhoid fever ten months previously. The necrosis followed sloughing of the cheek in the sixth week of the illness, but the sequestrum was not removed until eight months later. While in hospital a similar sequestrum had come away from the right upper jaw. The symmetry and the part of the jaw affected were in agreement with Salter's description of exanthematous jaw necrosis occurring after scarlet fever, measles, and small-pox. Dr. Edington having shown other specimens of a surgically interesting kind was cordially thanked for his demonstrations.

WINDSOR AND DISTRICT MEDICAL SOCIETY.—A meeting of this society was held on May 27th, Mr. W. B. Holderness, the President, being in the chair.—Cases and specimens were shown by Dr. G. L. Eastes, Mr. J. W. Gooch, Mr. W. H. Beresford, Dr. G. E. Hale, Dr. F. E. Wood, and Dr. C. R. Elgood.—Dr. Harry Campbell made a communication on Respiratory Exercises and Thoracic Mechanics. He pointed out that the position of the chest most favourable to the pulmonary circulation was that of full inspiration, first, because in it the lungs were most stretched and their suction action on the heart was at its maximum; and secondly, because the "bed" of the pulmonary circuit being widest in the inspiratory position the resistance in the pulmonary circuit was at its minimum. Hence, in all cases of dyspnœa the thorax was maintained in the inspiratory position, physiological breathlessness, cardiac dyspnœa, spasmodic asthma, pneumonia, pleural effusion, and pneumothorax being instances in point. This truth did not seem to have been recognised by clinicians. Dr. Campbell said that much the most satisfactory way of developing the lungs was by the induction of physiological breathlessness, as by running, jumping, skipping, and the like, and not by gymnastic exercises calculated to over-develop the muscular system and to render the thorax muscle-bound. He further contended that writers on emphysema had failed to furnish a satisfactory explanation of the enlargement of the chest in this disease. The enlargement in question was to be explained first, by the necessity for a widening of the pulmonary vascular "bed" owing to the destruction of the pulmonary capillaries; and secondly, to the need for a tightening or tuning up (so to speak) of the relaxed pulmonary tissue so as to maintain as far as possible the pulmonary suction in the heart at its normal level.

Reviews and Notices of Books.

Obstetrics: a Text-book for the Use of Students and Practitioners. By J. WHITRIDGE WILLIAMS, Professor of Obstetrics, Johns Hopkins University; Obstetrician-in-chief to the Johns Hopkins Hospital. With 8 Coloured Plates and 630 Illustrations in the text. London and New York: D. Appleton and Co. 1903. Royal 8vo, pp. 845.

THE appearance of a work on obstetrics from the pen of Professor Whitridge Williams is a matter for congratulation. The amount of research which he has carried out upon many subjects in this field of medicine and the high character of all the work emanating from the Johns Hopkins University render the book one of special interest. The manual, although a volume of some 845 pages, is easy to read not only because the author has a pleasing style but also because he has arranged his material in a number of relatively short and concise chapters. To each of these a bibliography is appended containing a list of the most important original articles upon the subject treated of and there is a refreshing absence not only of old and obsolete theories but also of the old and obsolete drawings which even at the present time are so often handed on from one text-book to another. The book is profusely and well illustrated with eight coloured plates and 630 illustrations, almost all original.

In considering racial differences in the pelvis the author points out the interesting fact that contracted pelves occur several times as frequently amongst black as they do amongst white women (21 per cent. to 7 per cent.), while the frequency of operative deliveries is greater amongst the latter. This would appear to be due to the small size of the children's heads amongst the negroes. The description of the changes that occur in the decidua and the imbedding of the early ovum is particularly good. Professor Whitridge Williams is inclined to agree with Graf Spee's view that the origin of the amnion in the early human ovum is by an inversion of the wall of the original blastodermic vesicle, a view which has been confirmed by Selenka's observations upon monkeys

and which is admirably illustrated by Spee's drawings of his earliest human ovum with an embryonic area 0·4 millimetre long. The account of the development of the early placenta is the best that has so far appeared in any text-book in the English language.

The author's views upon the antiseptic precautions necessary to be taken in the conduct of labour are very thorough. He advocates the permanganate of potassium and oxalic acid method of disinfecting the hands, and recommends that, before applying forceps, the genitalia should be shaved. We are afraid that women in this country are hardly educated up to this point of surgical cleanliness. We, however, entirely agree with the advisability of all such precautions being taken, but the difficulties of carrying out such an elaborate preparation in private practice are made a little too light of.

In the chapter upon the forceps it is recommended that it should always be applied to the sides of the child's head, the position of the lowest ear being first defined, and in the management of unreduced occipito-posterior presentations the application of the forceps to the sides of the head and the rotation forwards of the occiput after it has reached the pelvic floor are advocated. The forceps is then removed and re-applied. It is interesting to note that the author does not commend the operation of symphysiotomy. He does not agree with the claim that is made that it is a suitable operation for the general practitioner to carry out, and sums up his remarks upon the subject by writing "that he does not expect to perform symphysiotomy under any circumstances and believes that the present enthusiasm for it will eventually disappear." This view of the matter is one that has found a good deal of favour in this country and at the present day there is hardly a single English obstetrician of note who is an enthusiastic supporter of this operation. On the other hand, the induction of premature labour, a method of treating cases of contracted pelvis which is constantly being practised amongst us, finds but little support in this work. It must be remembered that the fœtal mortality is undoubtedly high, varying as it does from 12 to 45 per cent. and when we read that Professor Whitridge Williams has had a fœtal mortality of only 13 per cent. in a series of 278 cases of contracted pelvis in which premature labour was not induced the position which he takes up is in part explained. Bar, who has had a large experience of the induction of premature labour, has practically abandoned it and recommends the performance of Cæsarean section at term if spontaneous delivery does not occur. With this view the author is in agreement and he would limit the induction of premature labour to cases where the pelvis is normal but the child is abnormally large. If we turn to the account of the treatment of cases of contracted pelvis, a section in which the illustrations are especially good, we find that in flattened pelves with a conjugate diameter varying from 8·9 to 7·5 centimetres the performance of Cæsarean section or symphysiotomy is recommended if, after some hours of efficient second-stage pains, there is no likelihood of engagement of the head and the patient is in a good condition and in a well-regulated hospital. If, on the other hand, the patient is not placed under such favourable conditions and spontaneous delivery does not occur forceps should be applied obliquely to the head and a few tractions should be made. If the head shows no tendency to advance craniotomy must be performed. The method of treatment advocated is all in favour of a decided advance in the number of cases subjected to Cæsarean section so long as the patient is under favourable conditions, a plan of treatment which Professor Whitridge Williams thinks is likely to lessen very markedly the fœtal mortality while the maternal mortality will be reduced to a minimum.

The chapter upon Puerperal Fever contains an excellent summary of the bacteriology of the disease and in discussing the treatment the employment of the curette is unhesitatingly condemned. The administration of anti-streptococcic serum is not held to be of much value in the treatment of these cases, nor does the author think that the practice of removing the uterus with the idea of limiting the further spread of the poison is an operation likely to be at all commonly practised or of much avail.

The work can be recommended not only because it is well up-to-date, but because many of the methods of treatment advocated, although not in common practice at the present time, are likely to be the current teaching of the future.

Handbook of Climatology. By Dr. JULIUS HANN. Part I., General Climatology. Translated with the author's permission from the Second German Edition, with additional References and Notes, by R. DE COURCY WARD, Assistant Professor of Climatology in Harvard University. New York: The Macmillan Co. (London: Macmillan and Co.). 1903. Demy 8vo, pp. xiv. + 437. Price 12*s.* 6*d.* net.

PROFESSOR HANN'S well-known "Handbuch der Klimatologie" first appeared in 1883. The present volume is an excellent translation from the second edition of 1897 of the portion dealing with general climatology. It forms a complete work in itself. Numerous references have been added and some changes have been made in the text with a view to bringing the subject up to date, but the translator points out that every change has been made with the full approval of Professor Hann. The translator likewise states that though some new examples of climatic phenomena have been added, chiefly from the United States, most of the examples given necessarily still relate to Europe, because the climatology of that continent has been studied more critically than that of any other region. Professor Hann's work certainly deserves to be better known in England and America than it is at present and the translator is to be congratulated on the English edition now offered to the public.

It would be impossible to discuss much of the work in a short review. The sections on winds are of great interest to medical men. Though all agree that a certain amount of movement of the air has a beneficial effect in maintaining the purity of the supply, yet most are convinced that strong, cold, and damp winds may be injurious to weakly and diseased persons. They exert a generally depressing effect and favour any tendency to bronchitis, and it is thus that Dr. W. Gordon explains the harmful influence of the west and south-west winds in Devonshire in regard to pulmonary tuberculosis. Moreover, cold strong winds induce persons to keep doors and windows shut and to remain in stuffy rooms. One of the great advantages of a sheltered sunny winter climate is that more time is likely to be spent in the open air.

Professor Hann selects striking and often familiar phenomena to illustrate elementary principles. Thus, he very clearly explains the causes of the usual morning and evening winds in mountain valleys and the apparent exceptions to the rule, such as in the Upper Engadine. The morning wind blows down instead of up the valley of the Upper Inn during the warmer months, whilst in the side-valleys the morning winds blow upwards according to the rule. Billwiller and others have shown that this apparent exception is due to the fact that the Upper Engadine is not inclosed at its upper end and that on the further side of the Maloja Pass, which is but little higher than the valley floor itself, is the head of the deep and well-warmed valley of the Maira (Upper Bergell) the air of which rises above the level of the Maloja Pass and descends the Upper Engadine valley. Professor Hann likewise explains the origin of the "Foehn" and other local winds for which various theories have at different times been propounded. The results of the studies of Erk, Billwiller, and Pernter show

"that in the rear of the larger barometric depressions which usually pass by on the western or north-western side of the Alps there are developed local depressions with their own inflowing spiral wind systems along the northern border of the Alps and in the Alpine valleys themselves and that these are the immediate cause of the Foehn." This explains the local violence of the Foehn winds and their frequent occurrence in the eastern Alps, especially at Innsbruck, in apparent disregard of the general distribution of barometric pre sure. Winds analogous to the "Foehn" of Switzerland occur in other countries and can be similarly explained.

In regard to the theory of Dubois concerning the great changes of climate to which the world has, according to geological evidence, been subjected the following conclusion is arrived at: "One thing, however, is certain and this is that in explaining the climates of the geological past the sun cannot be considered to be an absolutely constant source of heat. Hence, such considerations as those which have been urged by Dubois are perfectly legitimate."

In the portion of the book dealing with mountain climate the physiological effects of diminished atmospheric pressure and the question of "mountain sickness" are considered The effects of high altitudes on the blood are, of course, alluded to, but many observations on the subject remain unnoticed. Thus, though mention is made of the writings of P. Bert, Egli-Sinclair, A. L. Rotch, F. Viault, A. Müntz, and P. Regnard, those of F. Miescher, F. Egger, A. Gottstein, E. Meissen, G. Schroeder, von Pacht, S. E. Solly, W. A. Campbell, and H. W. Hoagland and other recent observers have been omitted. Yet it must be allowed that the whole subject of blood changes at high altitudes has even yet not been settled, and possibly a prolonged discussion of the question might be considered out of place in a handbook of general climatology.

We consider that the present volume should be in the hands of every student of general climatology since it is a careful, ably written, and trustworthy text-book on the subject.

LIBRARY TABLE.

The Castration of Cryptorchid Horses and the Ovariotomy of Troublesome Mares. By F. T. G. HOBDAY, F.R.C.V.S. London and Edinburgh: W. and A. K. Johnston. 1903 Pp. 105. Price 5s.—The treatment of cryptorchidism in the horse is not uncommonly a matter of necessity, as such an animal may at any time display a vicious and treacherous disposition. Mr. Hobday has collected in this little book an interesting series of consecutive cases of castration of cryptorchid horses and of ovariotomy of troublesome mares. With regard to the fertility of such horses it is interesting to note that spermatozoa were demonstrated by Professor M'Fadyean not only in five of the cases where the testis was in the inguinal canal but also in two instances where it was in the abdominal cavity. Two of the colts were out of the same mare but by different sires, while three were by the same sire out of different mares. In regard to the troublesome mares it is not uncommon to get a condition of almost continuous œstrum which renders them too objectionable or treacherous to be used and the only thing to be done is either to sell the animal or to have it operated upon. The result of ovariotomy, as a rule, is good, except in the case of aged mares or in those in which the habit of kicking has been of long standing. The operation is performed through the vagina and the fact that in two cases the animals were ridden within seven and ten days respectively shows how little shock is produced. The book is an interesting proof of the success with which major surgical operations can be performed upon equine patients under anæsthetics and with modern antiseptic precautions.

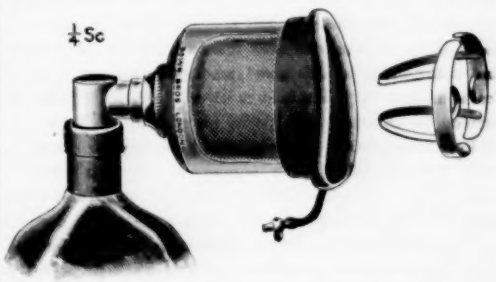
JOURNALS AND MAGAZINES.

The Medical Magazine.—The issue for May contains some remarks upon the Midwives Act by Dr. W. J. Sinclair which are prefaced with the hope that future amendments to the Act will be in the direction of greater stringency and efficiency. He considers that more definite limitations should be placed upon the action of the midwife of the future and that her scope should be clearly outlined in a manner which is not likely to obtain under the Act as it stands. Dr. Frederick Taylor contributes an article which supports his well known views upon the treatment of chlorosis, and the editorial notes touch briefly upon general events of current interest in the medical world.

New Inventions.

AN INHALER FOR THE ADMINISTRATION OF SOMNOFORM.

THE accompanying illustration represents an apparatus which I have now used for some months for the administration of somnoform, consisting of a celluloid face-piece connected by means of a right-angled metal tube to a rubber bag. The face-piece is lined with lint which is maintained in position by a special spring, horse-shoe in shape, preventing collapse of the lining during any deep inhalation by the



patient. The lint can be thus readily changed and a clean piece substituted. In using this apparatus the dose of somnoform required for a single administration, producing an anæsthesia averaging from 90 to 120 seconds, is about two and a half cubic centimetres—i.e., half the dose of the drug marked on the bottles in which it is supplied for use with the handkerchief cone adopted by Dr. Rolland. The apparatus was made for me by, and can be obtained from, Messrs. Down Bros., Limited, 21, St. Thomas's-street, London, S.E.

R. H. JOCELYN SWAN, M.S. Lond., F.R.C.S.
St. Thomas's-street, London Bridge, S.E.

ENEMA SYRINGE.

MR. R. J. REUTER of 6, Well-street, Jewin-street, London, E.C., has brought to our notice a new enema syringe presenting certain novel features in its parts which are of distinct hygienic advantage. To begin with, there are no metal parts at all in the appliance, and therefore no metallic contamination can take place or deterioration or break-down of the valves due to rusting or corrosion. The valves, which permit of the passage of the fluid by the action of the elastic chamber in one direction, are also made of vulcanite. The cannula terminates in a circular slit so that the fluid is delivered in the shape of a spherical film. There is thus a considerable but gentle distribution. The vaginal injection tube may be replaced by a vulcanite rectum pipe. The valves can easily be removed for cleansing purposes and all parts can readily be washed with an antiseptic solution. Altogether the special construction of this enema syringe is calculated to insure the use of a perfectly clean instrument for the particular purpose for which it is designed.

THE LANCET.

LONDON: SATURDAY, JUNE 13, 1903.

The Metropolitan Hospital Sunday Fund.

NEXT Sunday, June 14th, is Hospital Sunday. All our readers know it, and the strenuous exertions of the supporters of the Fund and of ourselves to bring the occasion prominently before the public have led to the fact being common knowledge also. What remains for us to do on the eve of the great annual collection is very little. We can only add to our advocacy of the movement a few last words in reinforcement of the extraordinary efforts being made this year to ensure a record result. The actual and final advancement of the claims of the Hospital Sunday Fund upon the public does not rest with us. The maintenance, efficacy, and well-being of the institutions which exist for the healing of the sick and maimed poor of all creeds and nationalities in this great metropolis will be pleaded for to-morrow by the ministers of all sections of religious opinion in churches and places of worship dedicated to various creeds. Our part has been to supply the pleaders with facts in aid of their arguments and with concrete reasons upon which to base their demands for liberal alms. Our annual supplement strives to do these services, and we are proud to know that its publication in our columns and its dissemination in places of worship a week prior to the collection are regarded by the managers of the Fund, as well as by the occupants of the most important metropolitan pulpits, as a powerful adjuvant to the cause.

Thirty years ago the idea of instituting an annual collection in the metropolitan places of worship for the metropolitan hospitals and dispensaries first took shape, and the leading part that was played in the movement by the proprietors of this journal, and especially by our then editor, the late Dr. JAMES WAKLEY, by Sir SYDNEY WATERLOW, and by the late Canon MILLER of Birmingham may properly be recalled. At that time it was difficult to arouse public interest in the needs of the hospitals. The value of the work done for the sick and injured poor of London by many noble healing institutions was not recognised by the public to the same extent that it is now, and the powerful patronage under which the Metropolitan Hospital Sunday Fund and King Edward's Hospital Fund for London flourish to-day had not yet been extended to them. It is known now to all England that the KING OF ENGLAND makes the condition of, and the treatment of, helpless sufferers in his imperial capital the subject of his peculiar and anxious care. When he instituted the Fund that bears his name we stated definitely that it was in no sense to be regarded as a rival or a supplanter of the older charity, a point which has since been emphasised on several occasions. This year HIS MAJESTY has done more. With a magnificent spirit of coöperation in the work of the Metropolitan Hospital Sunday Fund he attended St. Paul's Cathedral last week, accompanied by the QUEEN and many members of the Royal Family, and there took part in an enthusiastic service at which a special appeal was made on behalf of the London hospitals. A magnificent sermon, clear, brief, eloquent, and pointed, was preached by the Bishop of STEPNEY, and no less a sum than £4300 was received at the collection made upon the close of the service on behalf of the Metropolitan Hospital Sunday Fund. The impetus and publicity that HIS MAJESTY'S action has given to the work and claims of this Fund will certainly have enormous influence upon the donations of to-morrow. Once again and in the most prominent and practical manner our KING and our QUEEN have displayed their known feeling towards the London hospitals, and so far-reaching is the influence of their opinion, because so genuine is the personal affection which they inspire, that we may hope that the total to be received this year by the Metropolitan Hospital Sunday Fund will be the one which has always been regarded as the proper figure for an annual collection in such a city and for such an object—viz., £100,000.

Following hard upon the invaluable assistance of their Majesties there was held this week at the Mansion House an important meeting with the object of furthering public interest in the hospitals and medical charities of the metropolis. At this meeting His Grace the ARCHBISHOP OF CANTERBURY brought forward a motion in these terms: "That in view of the great interest taken by HIS MAJESTY in promoting the welfare of the metropolitan hospitals this meeting pledges itself to use every effort to make the Hospital Sunday collection a 'record' one this year." The Archbishop said that the corporate life of which Londoners should be proud would be deliberately set on one side if the claims of the London hospitals for real, substantial, and permanent support were ignored—indeed, that those doing so would place themselves outside the pale of ordinary civilisation. That is the view—the strong, clear view—that we should have expected his Grace to take, and it is our own view. No citizen is worthy of the name of citizen who does not acknowledge cheerfully that it is his duty to help to the best of his ability the sick and suffering poor of the community. Sir R. DOUGLAS POWELL in seconding and Sir FREDERICK TREVES in supporting the motion, which was unanimously adopted, took practically the same line, though using different illustrations to point their words. They showed that not only had the work done by the hospitals of London enormously increased in bulk but that by its higher scientific standards it was able to do incalculably more permanent good than was possible under older conditions. This is a side which is too often neglected by those who are speaking in behalf of hospital charity, but it was made very definitely by both the speakers who affirmed out of an enormous experience of hospitals that the public, in return for their contributions, received benefits which repaid the debt over and over again. Self-interest, in short, should also inspire the vast generosity that we hope to record as the result of the collections to-morrow in the various metropolitan places of worship. Have we not in these few words justified a belief that the record total will be reached?—indeed, we do not

see why the ideal figure should be fixed at any sum. Love of GOD and love of man, loyalty to the Crown and loyalty to the ordinary standards of civilisation, generosity and prudence alike, should prevail with us to give to the limit of our power.

The Royal Dental Hospital and its Honorary Anæsthetists.

IT is satisfactory to learn that the affairs of the Royal Dental Hospital as regards its staff of anæsthetists are being settled in a manner that complies to some extent with the views that we expressed in these columns some four months ago, at a time when those responsible for the management of the hospital appeared to be on the eve of a most unfortunate departure. The Royal Dental Hospital would certainly have suffered not only in prestige but in its capacity for fulfilling the purposes of its existence had the committee of management persisted in its original proposal, which was virtually the summary dismissal of its honorary staff of anæsthetists. The proposal was made hastily and without proper regard either for the needs of the hospital or for the ordinary forms of courtesy, and if it had been carried out the charity would have suffered the obloquy of being placed in a retrograde position. Both the medical profession and the public at large would have seen in the failure to recognise the importance of maintaining a strong staff of anæsthetists a remarkable indifference to the trend of modern scientific opinion. The hospital authorities appear anxious now to escape this reproach. They are also desirous of avoiding the appearance of belittling the services of their staff of anæsthetists, an appearance that, considering the traditions of the hospital and how intimately the progress of our knowledge of anæsthetics in this country is bound up with the practice within its walls, was a peculiarly unfortunate one. If we are not able to say that the scheme of reform which it is proposed to adopt is a perfect one, we are glad to recognise a spirit of conciliation in the new plan for the regulation of the administration of anæsthetics in this important institution.

The committee of management of the Royal Dental Hospital has now adopted the report presented to it by the subcommittee appointed early in the year to consider and to report upon the arrangements for the administration of anæsthetics at the hospital. This report was carefully discussed at a meeting held on May 21st and may be considered to embody the views of the authorities. It commences by alluding to the constantly increasing number of patients requiring anæsthetics and to the difficulty in satisfactorily accomplishing the large number of extractions which have to be made. As the obvious way of dealing with the mass of work the appointment is recommended of two paid officers whose duty it shall be to see "that no case requiring an anæsthetic is dismissed without treatment." This is not a very clear definition of the functions of the paid anæsthetists. They will be engaged, we take it, in the administration of anæsthetics when these are required, not in arranging for the reception, or the dismissal, of patients, for which they should be in no way responsible. Where there is a doubt as to the propriety of administering anæsthetics the honorary anæsthetist rather than the paid officer would, we presume, be the authority relied upon for a decision. The next section of the report deals with the appointment of the honorary anæsthetists and of these it is recommended that six should be appointed "to have the general supervision of the department and to be responsible for its efficient management to the committee of management." This seems clear enough, but when the duties of the honorary anæsthetists are set out in detail it is not easy to understand how they will perform them. They are to be six in number and "each honorary anæsthetist is to attend at the hospital one day in each week (the respective days to be arranged amongst themselves), either morning or afternoon, for the purposes of administering anæsthetics, of giving advice and instruction to the house anæsthetists, and of generally supervising the department." If this paragraph means that each anæsthetist shall once a week spend a morning or else an afternoon at the hospital, then, as there are to be but six anæsthetists, obviously five mornings or afternoons remain unprovided for if, as we believe, the hospital is not open to patients on Saturday afternoons or during Sundays at any hour. It may be intended that each honorary anæsthetist shall spend one day a week at the hospital, that day being made up of two mornings, or of two afternoons, or of one morning and one afternoon, in which case one member of the honorary staff would get a weekly half-holiday. The paragraph that follows is equally puzzling, for it states that the anæsthetists shall "when requested, either by a dental surgeon, or in his absence by the dental superintendent, attend, on their own day as speedily as possible, to administer anæsthetics in special cases." But surely the honorary anæsthetists should not require special requests to attend on "their own day" when they would presumably be in the building.

We have said enough, and in no spirit of carping, to show that the wording of the adopted report is open to objection; to the matter of it we take little exception. The present honorary staff of anæsthetists will resign so as to allow of the remodelling of the department, but they will be eligible, of course, for re-election, though only six of them can retain their posts. The holding of the posts will be subject to annual re-election. We see no particular gain in the reduction of the number of honorary anæsthetists and it is highly important that the process of selection decided upon should not be allowed to look as though it had been meant to secure the absence of any particular member of the present staff. The immediate result of the reduction in the staff will be that on a certain number of mornings or afternoons the administration of anæsthetics may be entirely in the hands of the paid or house anæsthetists, and we do not know what grounds the committee of management may have for supposing that for these posts men of much experience will be available. This, however, remains to be seen and we hope heartily that an honest attempt to meet a very serious difficulty will result in success. But we would urge upon the committee of management the absolute necessity of revising the phraseology of the report before transforming it into new regulations. It will be courting a recurrence of trouble if the character and scope of the work expected from the honorary staff of anæsthetists and from the house anæsthetists are left in any

sort of doubt. The committee of management should define exactly what are the duties which it requires, and having done so there will be nothing but praise for it if it takes the most drastic steps to insure those duties being performed.

The General Medical Council and the Royal Colleges of Physicians of London and Surgeons of England.

ON several occasions during the last few years it has been our duty to refer to the lamentable dispute which has arisen between the General Medical Council on the one part and the Royal College of Physicians of London and the Royal College of Surgeons of England on the other with regard to the conduct of the earlier portion of medical education—a dispute which has now reached a stage at which accommodation seems more difficult than ever and from which any advance on either side seems more likely to injure than to benefit the cause which both of the disputants, no doubt with entire sincerity, declare that they have at heart. It will be remembered that the Council several years ago, after prolonged deliberation and with the full assent of the representatives of the London Colleges, determined to increase the length of the medical curriculum from four years to five and to allow the first of these years to be devoted, mainly or entirely, to physics and biology. The change was very generally approved by the profession and after a necessary period of transition it was commonly believed to have been brought into operation and to be working satisfactorily to all concerned. From this belief the Council was somewhat rudely awakened by a communication from the Royal College of Surgeons in Ireland in which it was set forth that the new regulations had, in fact, been evaded by the London Colleges in the sense that they accepted as the first year of the new curriculum what was, in fact, the last year of ordinary school education conducted at almost any establishment in which instruction in physics and biology was said to form part of the course. The Irish College pointed out that its own strict observance of the recommendation of the Council placed it at a great disadvantage as compared with competing qualifying bodies which disregarded it and intimated that unless the Council could induce the London Colleges to conform the Irish College might be compelled to cease from doing so. It is needless to follow the details of a controversy every step of which has been recorded and commented upon in our columns. We need only say that the Council determined to refuse registration to so-called "medical" students who were still pupils at common schools unrecognised by the Council and that the London Colleges, in reply, ceased to require registration as a condition of examination for their diplomas. The Council appointed a strong committee, of which the representatives of the two London Colleges were members, to inquire into and to report upon the circumstances of the case, and this committee, the two representatives in question alone dissenting, recommended the Council to report to the Privy Council that the course of study required by the Colleges was, in the terms of the Medical Acts, "insufficient" to secure the possession of the necessary skill and knowledge for the practice of the profession. In the meanwhile the advice of counsel had been sought upon the legal aspects of the question, and finally it was carried as an amendment to the report of the committee that the examinations of the Conjoint Board in chemistry, physics, and biology should be visited and inspected by Dr. WINDLE and Professor CAMPBELL BROWN on behalf of the Council and that the whole matter should be suffered to rest until the report of this inspection had been received.

The report in question was presented to the Council during the session just concluded and its consideration was adjourned to a special session to be commenced on July 15th. We have already published the essential parts of the report, and it is sufficient now to say that it entirely supports the contention of those who maintain that the knowledge gained during the last year of school teaching is of no appreciable value as a preparation for medical study. "Nothing struck us more forcibly," say the visitor and inspector, "than the fact that scarcely a single candidate presented himself in biology who could be said to have exhibited the possession of any real grasp of the elementary principles of the subject." The ignorance of many of the candidates is said to have been "unfathomable" and the general character of the examination such that "a candidate might very well pass and does pass with only an empirical knowledge of a few facts crammed up from a book or a teacher and with no understanding of elementary principles." It is abundantly manifest that the first year of what is nominally medical study, as it has been conducted under the regulations of the London Colleges, has been of no practical value to the students, either as regards mental training or as regards the acquirement of knowledge calculated to afford a satisfactory foundation for future attainments. On the presentation of the report SIR VICTOR HORSLEY gave notice of his intention to move that the insufficiency of the courses of study and examination should be represented to the Privy Council in accordance with the terms of the Medical Acts; and this notice appeared in the *Times* report of the proceedings of the Council on the following day. The PRESIDENT called attention to it as having appeared by error, inasmuch as the notice had been withdrawn from the consideration of the Council for the time being. At any rate, it may be regarded as a declaration of war against the Colleges and if it should hereafter be adopted by the Council it can scarcely fail to be productive of very mischievous consequences.

The report of the visitor and inspector has, of course, been communicated to the two Colleges concerned and the College of Physicians has not yet furnished the Council with its commentary. That of the College of Surgeons has been received and published; and it would be difficult, we think, to conceive a document displaying a more complete incapacity to discern the magnitude and the character of the issues which are involved. An apparent and wholly unimportant verbal inconsistency between two sentences of the report is seized on; and "we"—i.e., the College—"are of opinion that the visitor and inspector are in error in supposing that the examination is

not sufficient for the purpose for which it is intended. This purpose is the testing of such knowledge of chemistry, physics, and biology as a student may acquire in proper laboratories and under sound teachers in the first year of his medical studies." Such an attitude is manifestly hopeless and would clearly compel the Council to report to the Privy Council in the manner proposed by Sir VICTOR HORSLEY. Of the result there could, we think, be no doubt. The Colleges would support one another with the whole of their influence and the question of the sufficiency or insufficiency of the current system of medical education would be argued before an incompetent legal tribunal, certain to be unduly influenced by the supposed authority of venerable corporations. The effect produced upon the public would be to increase their distrust of medical science and to give a new lease to quackery and to "anti-ism." The licensing bodies, entirely released from their present doubtful allegiance to the Council, would be free to render themselves more and more acceptable to students and the standard of qualification would decline steadily under the influence of open competition. We hope it is not too late to appeal to the Royal College of Physicians of London to stay the downward course of events by an act of wise and conciliatory statesmanship, such as the history and repute of the College give us a right to expect from those who control its destinies. The exceeding badness of the education given at the "approved" schools has now been rendered manifest; and the College might gracefully take the lead in revising both the list and the requirements. Sir VICTOR HORSLEY'S motion will meet with no influential support unless the Colleges themselves render its acceptance inevitable, for doubtless the Council has no desire to provoke a contest which, however it terminated, could only be disastrous to all concerned. It is manifest that the Council cannot recede from its present position without absolute and irrecoverable loss of authority; and it is equally manifest that such a loss would reduce the granting of medical qualifications to a mere Dutch auction between competing bodies. From such an issue we appeal to the Royal College of Physicians of London to preserve both the profession and the country, and we feel confident that we shall not appeal in vain.

Annotations.

"Ne quid nimis."

THE BALLACHULISH CASE.

THE case of Dr. Lachlan Grant, whose treatment at the hands of the directors of the Ballachulish Slate Quarries Company, Limited, has been made the subject of detailed comment in these columns on several occasions, has taken a step forward. A judgment of Lord Kyllachy, it will be remembered, recently held that in dismissing Dr. Grant from his position as medical officer to the Ballachulish Slate Quarries the directors of the company had acted within their rights, although the men and not the directors paid Dr. Grant's salary and although they thoroughly trusted him and desired his continuance in his post.[1] Against this judgment Dr. Grant has appealed to the Inner Division of the Court of Session, before which the case came on May 29th. Four judges were on the bench and it is understood that after a prolonged discussion the court was equally divided upon the point at issue—viz., whether the agreement under which Dr. Grant held his office could be terminated at the sole will of the directors. The court made *avizandum*, so that its ultimate decision may be delayed some time. In the meantime Colonel Malcolm of Poltalloch, chairman of the Ballachulish Slate Quarries Company, has been to Ballachulish, has met the quarriers, and has been subjected to a severe heckling. Colonel Malcolm read a written speech to the men in which he protested that the directors had acted throughout in the men's interests and that the manager was the men's best friend. The speech was received with ridicule by his audience. It was openly stated that the manager had caballed against Dr. Grant whose services the men paid for and intended to retain. Colonel Malcolm then made the amazing statement, according to the *Highland News* of May 30th, that Dr. Grant was dismissed "in order to make a new agreement with him." Being expressly asked if he meant "in order to make a new agreement with Dr. Grant" or "in order to make a new agreement with a different medical man," the Laird of Poltalloch deliberately repeated that it was intended "to reappoint Dr. Grant, but on a different footing," and immediately afterwards admitted that weeks before Dr. Grant was dismissed negotiations had been entered into with another medical man. Colonel Malcolm must have more than military courage to make such admissions. Colonel Malcolm also said that Dr. Dunlop Anderson of Ardsheal, a neighbouring landowner, who has been mentioned in our columns as throughout a firm supporter of Dr. Grant, had privately written to him recanting his position. This, we are informed by Dr. Anderson, is absolutely untrue, and proceedings have been taken to contradict Colonel Malcolm publicly. In this distressing case one thing is most clear and most gratifying—it is the absolute loyalty of the quarriers to Dr. Grant. They will not allow their employers to jockey them out of their clear right to select the medical man whom they pay; nor do they intend to let Dr. Grant have put upon him the gross injustice and slur of a summary dismissal when he has always discharged his duties efficiently. Surely the directors of the Ballachulish Slate Quarries must recognise that they are dealing with determined and reasonable men who, whatever the law may say, have justice on their side. Peace can only be restored by the reconfirmation of Dr. Grant in his post as medical officer to the quarries. This, Colonel Malcolm has said publicly, was the original intention of the directors and as the statement requires a little confirmation why should not his colleagues support Colonel Malcolm's words at once in a practical way? To do so will be to own themselves defeated? No. By such thoughtful action they will show that they have reconsidered a position which they took up in haste and upon information of a very doubtful kind. They will display the bravery that is not afraid to own an error of judgment and they will secure the respect of their men as well as their services—whereas now they enjoy neither.

[1] THE LANCET, Jan. 24th, 1903, p. 249.

TONSILLITIS.

TONSILLITIS is usually a more or less common disorder in London during the later spring months. This year sore-throats appear to have been even more prevalent than usual; indeed, many of the attacks have been very severe and accompanied by erythematous rashes and constitutional symptoms which have made the diagnosis between them and scarlet fever a matter of some difficulty. Inasmuch as the specific characteristics of scarlet fever are not infrequently masked by the concomitant symptoms due to poisoning with streptococci, this difficulty

of diagnosis is hardly to be wondered at. It is abundantly evident that the condition of the wood pavements, the recent drought, and the high winds have acted in coöperation to load the lower strata of the metropolitan atmosphere with organic and infective matter of a highly dangerous character. Although it is obviously possible by a more careful watering of the streets and by improved methods of scavenging to minimise the dangers arising from dust, it is improbable that, as long as we depend on the energy of the horse for the purpose of vehicular traction in the streets, we shall be free from epidemics of tonsillitis during times of drought and high winds. After all there are advantages, direct and indirect, not only in motor-cars, but also in petrol, as a source of energy and as an antiseptic for the streets.

FICTITIOUS WINES: SOME INTERESTING RECIPES.

WE believe on the whole that the great bulk of the cheap wines sold to the British public by respectable merchants are genuine, in so far that they are real fermented grape-juice. This is, perhaps, more particularly so in regard to Bordeaux wines, though, doubtless, there are genuine light red wines imported as French wines which, however, have not been produced in France. Resent this comparatively trifling form of fraud as we may, it is obviously not so wicked as having a wine thrust upon us which is not fermented juice at all. A short time ago a person somewhere on the banks of the Rhine was caught compounding a fluid which he bottled and described as "Niersteiner," which of course implied that it was the wholesome wine produced in a certain district famous for its light Rhine wine. As a matter of fact, the fermented juice of the grape proved to be the smallest item in the formula, the rest being made up of alcohol, water, and certain flavouring materials. In this country also there is no doubt that to a certain extent—but we think a limited extent—fictitious wine is made. Thus, in some evidence given before the Departmental Committee on Food Preservatives four years ago it was stated that somewhere on the banks of the Thames a preparation was made which was sold as "St. Julien." As there was no duty paid on this stuff it is not surprising that its price was not more than 6½*d.* a bottle and we daresay that that figure left a fairly respectable margin of profit to the manufacturer. Possibly this "wine" brought a much higher price when ultimately sold by the retailer to an individual customer. It would be interesting to discover the true composition of the claret commonly labeled "St. Julien" which is to be found at most public-houses or country inns, however remote they may be. As a rule there is nothing but the description "St. Julien" or perhaps "Medoc" on the label and there is certainly no evidence of *bona fides* on the cork. In this connexion we have recently come across some interesting recipes for making wines which are calculated to throw some light on the "wine" which is now and again met with. To make Bordeaux wine, for example, "it is best to use a light Hungarian red wine. Mix with 50 gallons one pint of kino, two to three ounces of sulphate of iron, dissolved in one quart of boiling water, and one wine-glassful of extract of orris root and a like quantity of raspberry extract." We may parenthetically remark that we have occasionally tasted cheap clarets having a flavour resembling that of orris root. For making Burgundy it is enjoined to "mix in a barrel 100 parts of white wine, ten of the juice of black cherries, six of crushed large raisins, six of pulverised cinnamon, half of pulverised crude tartar, and 50 of must concentrated by evaporation." The following formulæ are also suggested. "*Champagne liqueur.* Boil eight and three-quarter pounds of the finest loaf sugar with one gallon of water, add gradually while the water is boiling half gallon of alcohol of 90 per cent. and then filter the mixture." "The above liqueur is added to all the following compounds." (We reproduce them literally to show the disgraceful use made of the names of certain well-known champagne firms.) "*Chandon et Moet (Green Seal).* Mix the above liqueur with seven and a half gallons of white wine and one quart of Cognac." "*Louis Röderer (Green and Bronze Seal).* Mix the champagne liqueur with seven and a half gallons of white wine, one bottle of Cognac, and four drops of sulphuric ether dissolved in Cognac." "*Heidsieck et Cie (Sealed with Tin-foil).* Mix the champagne liqueur with seven and a half gallons of white wine and three quarters of a pint of Cognac." The next one is very interesting. "*Lemberg Geldermann et Deittz (Sealed with Tin-foil).* Mix double the quantity of champagne liqueur with seven and a half gallons of white wine and three-quarters of a pint of Cognac in which two roots of celery carefully cleansed have been previously digested for four hours." Similar formulæ for other brands are given and directions are appended for making Madeira, Malaga, and port. In one of these (Malaga) "*essence de Goudron*" is employed. The champagne preparations "are corked with champagne corks and laid on their sides with their mouths sloping downwards. They are recorked the next day with the corking machine. The corks before using them must be laid in hot water, and before placing them in the machine moistened with sugar syrup, and as soon as driven into the bottles tied with cord and finally wired." Anything more brazen than this we can hardly imagine.

FRACTURE OF THE BASE OF THE SKULL WITH SPECIAL REFERENCE TO PROGNOSIS AND MENTAL SYMPTOMS.

AT the presidential address recently delivered before the New York Neurological Society and published in the *Medical News* of May 16th Dr. Pearce Bailey gave an account of his investigations upon the subject of fracture of the base of the skull with special reference to prognosis, mental symptoms, and medico-legal bearings. The symptoms of fracture of the base of the skull had been described by Hippocrates. Though the symptoms were the result of an extreme degree of violence they presented, adds Dr. Bailey, a certain consistency of type. The mortality was high and varied from 55 to 60 per cent. Thus, of 58 cases of fracture of the base of the skull collected by Heer in 1892–99 death occurred in 29 cases, a death-rate of 50 per cent. Van Nes records 82 cases with 39 deaths, while Phelps, in his work on Traumatic Injuries of the Brain (1897), collected 286 cases of fracture with 176 deaths, a mortality-rate of 61 per cent. Of 69 cases collected by Weir, Bull, and the writer himself 40 died as the result of fracture of the base of the skull, a proportion of 58 per cent. The symptoms observed, both focal and general, were fairly uniform. The focal symptoms included amblyopia and amaurosis, oculo-motor paralysis, and paralysis of the facial nerve. Loss of consciousness and coma were the chief general symptoms. "The majority of the patients are in a state of coma when first examined and a goodly proportion die within 24 hours of the injury." Pupillary inequality with dilatation on the side most injured is the commonest symptom. There is a want of parallelism in the optic axes and diplopia may be detected in the milder cases. Facial paralysis comes next in order of frequency. The lower facial branches are more liable to be affected than the upper, and the facial paralysis tends to persist when the oculo-pupillary disturbances have passed away. The trigeminal nerve is rarely if ever the seat of focal paralysis. Injuries of the middle ear are frequent, together with involvement of the auditory nerve and deafness, but the exact mode of involvement of the auditory nerve is difficult to determine. A frequent symptom is weakness of the legs, coupled often with slight

rigidity of the affected parts. Occasionally there may be hemiplegia. The knee-jerks are frequently lost at first but later they return and may even be exaggerated. As regards mental symptoms, Dr. Bailey points out that a large proportion of patients who die never emerge from the coma immediately succeeding the injury. The most characteristic mental state is one of semi-coma or stupor with delirium. The patient lies still, resents being disturbed, and if disturbed becomes restive and irritable. There is frequently developed a muttering hallucinatory delirium which may, especially in alcoholic subjects, require watching and mechanical restraint. Sudden impulses to get out of bed and to rush out of the room are very common. Memory of events for an hour or for a day or two prior to the accident may be entirely lost. Dr. Bailey cites two cases in one of which the memory of events during the half-hour preceding a railway accident, and in the other of the incidents of four days preceding the fall from a horse, were abolished. The duration of serious mental symptoms is variable. Some patients emerge from the initial coma lucid in mind and free from any trace of mental affection. Others continue in a state of semi-coma and delirium for days and weeks and in a few cases cerebral and mental disturbances persist long after physical strength is regained. As regards prognosis the combined statistical records of Heer, van Nes, Phelps, and the writer give 494 cases with a mortality of 57 per cent. Death in the majority of instances is directly due to the injury, thus, 62 per cent. of the deaths occurred within 24 hours and 95 per cent. within five days. Those dying after longer periods developed either pneumonia or meningitis. As regards the ultimate prognosis with reference to mental life 15 out of 29 patients were traced by Dr. Bailey and their conditions were carefully studied. The following cases are extracted as typical instances. In Case 1 the patient was a boy aged seven years at the time of injury (April, 1901). He recovered in a few days. At present (1903) he goes to school. "He is slightly more irritable and boisterous than formerly and often becomes uncontrollable." He has no fits. Case 4 was that of a boy aged five years at the time of the accident (September, 1901). He recovered but has ever since then been nervous, irritable, and subject to headaches. He has no fainting or convulsive fits. Case 6 was a girl aged 13 years at the time of the injury (December, 1901). There are no untoward symptoms in this case. Case 8 was that of a man, aged 26 years, who had fractured the base of the skull in August, 1901. For 12 days he was in a state of semi-coma. He made an excellent recovery. At present he has slight ptosis and excess of one knee-jerk. There is amnesia for the events of four days preceding the injury. He is free from headaches or fits and his character is unchanged. Two other cases cited by Dr. Bailey showed after recovery a greatly increased susceptibility to alcohol. Insanity is rare, concludes Dr. Bailey, after fracture of the base of the skull as compared with fracture of the vault of the skull. The mental conditions occurring in the latter class of cases are proposed to be dealt with in a subsequent paper.

BATTERSEA BLUSTERINGS.

THE borough council of Battersea is a body in no need of advertisement but we may nevertheless call attention to its methods of pursuing the campaign against vaccination and incidentally express our sympathy with the unfortunate general practitioners whose lot happens to be cast in the district ruled by that corporation. Those, and they are probably many, who remember the council's attitude towards His Majesty the King at the time of the Coronation will be prepared to learn that it displays scant courtesy in its dealings with such comparatively humble persons as members of the medical profession. In connexion with an outbreak of small-pox which, we are not surprised to find, has occurred in Battersea, the local health committee reported recently that "cases have been traced to previous cases of the disease which have been treated by the medical practitioners in attendance as cases of disease other than small-pox." From the statement of the medical officer of health it appears that in one case a patient was kept under observation, though not isolated, for four days before it was decided that notification was necessary, while in another, which was described as "a very difficult case to diagnose," the true condition was not recognised for an even longer time. On the strength of these facts, at the meeting of the council on May 27th, several members insisted that the names of the medical men concerned should be published. Some of the reasons adduced in support of this proposition are worth recording. One gentleman declared that "he had no compunction for the doctors; they had none for the anti-vaccinators." Another "hoped that they would take the reasonable step of publicity, so that they might have a reasonable hope that these offences would not be repeated." A third instanced the depravity of his own medical adviser, against whom he launched the crushing indictment: "He's never been paid yet." Undue harshness was deprecated by the chairman of the health committee who regretfully admitted that "whatever their calling they were all in error sometimes; he was himself sometimes as a bricklayer," and eventually it was decided by 27 votes to 16 not to publish the names. We are, however, left in some doubt as to the part which the suggestion that publication would lay the council open to legal proceedings played in bringing about this happy ending. Possibly, if Battersea councillors had any practical experience of the difficulty of diagnosing small-pox they would be a little more charitable; but however that may be we protest strongly against the disgraceful attempt to pillory local medical men to which, under the pernicious influence of the anti-vaccination virus, so many members of the council committed themselves.

THE NATIONAL SOCIETY FOR THE PREVENTION OF CRUELTY TO CHILDREN.

THE annual report of this society has just been published. We learn from it that the progress of the society during the past year has been on the whole very satisfactory. The number of cases inquired into during this period in England, Wales, and Ireland (a separate report is issued for Scotland) has reached the considerable total of 34,945. This fact alone ought to constitute a sufficient vindication of the society's existence if such were necessary. At the same time it is encouraging to find in the speech of the chairman, Lord Ancaster, at the annual meeting a statement that the number of prosecutions instituted by the society has diminished. On the other hand, we note that the convictions obtained have been more numerous than previously. This apparent paradox is explained by the fact that the method always preferred by the society's agents where it is available—that of warning delinquents—has proved in many cases an effectual preventive against the practice of cruelty. Consequently the term prosecution has become narrowed in its meaning and it now includes a larger proportion of those inveterate forms of tyranny which can only result in a punitive sentence. It is gratifying to learn on the same authority that the attitude of the judicial bench is becoming increasingly friendly to the procedure of the society. Lord Alverstone has spoken in high praise of its work, which, in the language of another eminent judge, has been carried on with great prudence and forbearance and without needless and officious interference. We can cordially indorse these expressions of approval. Financially, the society, though not affluent, is in

a solvent condition. After meeting last year's expenses it could show a credit balance of £286. The assurance of its president that all funds intrusted to the managing committee are employed exclusively to the best advantage of suffering children requires no confirmation. Those who are conversant with the history and the administration of the society can have no doubt upon this point.

PLAGUE IN BERLIN.

A YOUNG Austrian medical man named Milan Sachs who was studying bacteriology in Berlin has just died as the result of an unusual accident. While injecting a rat with a culture of the bacillus of plague he wounded his hand and contracted plague by inoculation. A hospital attendant who nursed Dr. Sachs during his illness has since been unwell but is now believed to show no symptoms of plague. All the persons who came into contact with Dr. Sachs in any way after his illness declared itself are rigidly isolated in the Charité Hospital. It will be remembered that more than four years ago a similar accident occurred in Vienna and unfortunately resulted in several deaths. An account of this occurrence will be found in several numbers of THE LANCET, commencing with the issue of Oct. 22nd, 1898, p. 1080.

THE RELATION OF CHOLELITHIASIS TO PANCREATITIS.

THE *New York Medical Journal* of May 16th contains an important paper by Dr. Joseph Wiener, jun., on the relation of cholelithiasis to pancreatitis. Anatomical facts lead to the conclusion that a close relation must exist between affections of the common bile-duct and of the pancreas. A stone which obstructs the common bile-duct near the papilla of Vater must obstruct the duct of Wirsung. If the pancreatic secretion cannot enter the intestine microbes may make their way from the duodenum and multiply and set up pancreatitis. Moreover, the obstructed secretion may be forced backward into the parenchyma of the gland producing injurious effects. Opie has collected 32 cases in which pancreatic lesions and fat necrosis were associated with cholelithiasis. In one case a calculus had found its way into the pancreatic duct and caused suppuration. In 26 out of the 32 cases there was fat necrosis. In 1889 Thayer reported the case of a man, aged 60 years, who in the last 16 months of life had repeated attacks of pain in the left hypochondrium and epigastrium followed by jaundice. He became collapsed and died. At the necropsy the thickened gall-bladder was found to contain over 100 calculi. The common bile-duct was dilated to the size of the little finger and in the duodenum was a stone of the size of a hazel nut. The pancreas was large and reddish-brown and there was necrosis of the surrounding fat. In 1896 Kennan reported the case of a woman, aged 36 years, who was suddenly seized with vomiting and pain in the upper abdomen which were followed by collapse. Death occurred in 48 hours. At the necropsy a stone of the size of a pea was found projecting from the papilla and other stones were found in the gall-bladder and common duct. The pancreas was enlarged, intensely congested, and surrounded by local peritonitis. Dr. Wiener relates the following case. A woman, aged 41 years, the mother of three children, was suddenly seized with violent pain in the upper abdomen on Jan. 28th. On Jan. 30th the pain had increased and become colicky. The whole abdomen was tender and the right rectus muscle was somewhat rigid. Appendicitis was diagnosed. In the evening, when Dr. Wiener first saw the patient, the face was pale and anxious; the pulse was 120, somewhat irregular, soft, and compressible; and the temperature was 102·5°. The epigastrium and right hypochondrium were tender and the right rectus muscle was somewhat rigid at the level of the umbilicus. In the right flank was moveable dulness. A two-inch incision was made along the outer border of the right rectus muscle at the level of the umbilicus. On opening the peritoneum some clear fluid escaped. The omentum was studded with small opaque yellowish-white patches. The gall-bladder was distended and there was a large stone in the cystic duct. It was pushed back into the gall-bladder and cholecystectomy was performed. The head of the pancreas felt hard but it was not enlarged. Recovery followed. A piece of omentum which was removed for examination proved to be the seat of fat necrosis.

TOXIC AMBLYOPIA AND OTHER LESIONS DUE TO THE USE OF WOOD ALCOHOL.

IN the *Philadelphia Medical Journal* of May 9th Dr. J. W. Sherer gives an account of the dangers due to the consumption of methyl or wood alcohol in the case of five persons, four of whom had taken part in the festivities of a national holiday, the celebration of the event being marked by the free consumption of cheap alcohol largely consisting of wood spirits. The host, a man aged 32 years, provided himself on July 4th with a considerable quantity of cheap crude spirits of which he himself and his guests, three in number, partook freely on the following day. Within 24 hours he suffered from nausea and attacks of vomiting, headache and vertigo, sweating and partial paralysis, and stiffness of the legs which lasted for three days. About 24 hours after the debauch his vision began to fail and he could only dimly perceive large objects outside the central part of the field of vision. In the centre of the visual field there was total absence of sight (central scotoma) in both eyes. The pupils reacted to light and accommodation and ophthalmoscopic examination showed that the fundus in both eyes was redder than normal and considerably mottled. The sense of colour perception was entirely lost. The characteristic lesions of the eye produced by the drinking of methyl or wood alcohol and of drugs containing methyl alcohol have been described by Professor G. E. de Schweinitz and an account of the same was published in an annotation in THE LANCET of June 7th, 1902 (p 1615). Dr. Sherer adds that the second man who took part in the drinking debauch was less severely affected. He suffered from nausea, dizziness, vomiting, and headache. His eyesight became dim and this dimness lasted for a few days and then began to improve until in three weeks' time vision was quite normal. The third man drank more deeply than his companions, with the result that he had several attacks of vomiting and became very prostrate; he grew delirious and comatose, in which condition he died within a period of 48 hours. The fourth man became totally blind in two or three days and his sight has never been restored since then. The fifth case referred to by Dr. Sherer was that of a woman who swallowed a "small medicine-glassful" of methylated spirits in order to obtain relief from pain attending menstruation. Her condition became worse and she suffered from dizziness, vomiting, and severe headache soon after taking the spirits. At the end of 24 hours her sight began to fail and on the third day she could only dimly recognise large objects in the margin of the field of vision. Central vision was absolutely lost. The pupils reacted to light and to accommodation. Dr. Sherer states that a search through medical literature revealed 25 cases of toxic amblyopia due to wood alcohol. In all of these cases, as in the five cases reported by himself, the loss of central or macular vision was complete in character and generally permanent in duration. The pathological process is a retrobulbar neuritis of the optic nerve, affecting chiefly the axial bundle of nerve fibres arising from the macula lutea. The perception of red is lost first and then the dimness of sight progresses until central vision is

lost. Of the 25 cases recorded in literature 23 resulted from the ingestion, and two from the inhalation of methyl alcohol. The latter cases were as grave as the former and the symptoms of dizziness, nausea, frontal headache, and loss of central vision which followed were similar in both sets of cases. Persons should avoid incurring the danger of inhaling the fumes of methyl alcohol while the use of this substance in medicinal tinctures should be prohibited, adds Dr. Sherer, as a criminal offence. As regards treatment Dr. Sherer points out that no method has yet been proposed for treatment and that cure is almost impossible, since the destruction of the ganglion cells in the macula lutea of the retina and of the nerve fibres arising therefrom constitutes an organic lesion the results of which are irreparable.

INFANT MORTALITY IN BOMBAY, ITS CAUSES AND PREVENTION.

Mr. Dosabhai Rastamji Bardi, senior tutor of the Grant Medical College, Bombay, has reprinted from vol. vii. of the Bombay Medical and Physical Society's Transactions a valuable paper from his pen drawing further attention to a matter of the highest importance. An infant mortality of 593 per 1000 births and of 867·67 per 1000 of the population amongst children under one year of age recorded during 1899 is certainly very disquieting, especially so when we find that matters have been growing worse year after year. The acting health officer in his report for 1899 says: "The infant mortality can only be called appalling, a little less than one quarter of the total mortality being of children under five years of age and the greatest mortality of any age is that of infants under one year." For the eight years 1892–93 to 1899–1900, 70 per cent. of the total child mortality was amongst infants under one year of age. Thus there is nearly seven times the mortality of infants under one year of age compared to the mortality in England. The state of affairs which is revealed by the figures of infant mortality is alarming and unless serious and earnest efforts are made to improve it Bombay must be prepared to rank very low in the scale of civilisation and to have a permanent stigma on its sanitary condition. In addition to the ordinary conditions which bring about the deaths of children in all communities the special causes in Bombay appear to be the unhealthy surroundings, both natural and artificial, abject poverty rendered more keen and unbearable by famines and epidemics, and the superstitions and prejudices of the ignorant masses. Since 1892 there has been a steady increase in the number of the still-births; these have nearly doubled within a decade. The broad groups of maladies causing deaths among infants show that infant life is not so resistant to diseases as it ought to be and has not that recuperative power which a growing body ought to have. Debility and respiratory and nervous diseases cause the greatest havoc among infants. The number of still-births is a proof that infants are not born in healthy surroundings or such as are likely to favour their growth and vitality, and, further, that they are not sufficiently well nourished in utero. The paper contains several tables, one of which (Table IX.) deals with the "causes of deaths in children under five years of age in different castes and races," and shows that one factor in the causation of increased mortality in infants is a low social scale. The remarks of the health officer in his report of 1899–1900 to the effect that small-pox was confined to children below the age of five years and was worst during the first year of life sufficiently indicate the necessity of making efforts to vaccinate all infants before they are four months old. It is a curious and significant fact that among the poorer as well as the higher classes there has been a general complaint of want of breast milk in nursing mothers; infants are therefore subjected to artificial feeding—a serious menace to the health and growth of the infant population and one which points to a deterioration in the health of mothers, due to bad hygiene, debility from mismanagement during and after parturition, effects of poverty, and other similar causes requiring careful and thorough investigation. Mismanagement during childbirth is an important factor in the high early death-rate and the writer draws a vivid picture of the dirty, overcrowded room in which the Hindu female is confined and of the after-treatment she receives. Mr. Bardi draws attention to the circumstance that many women of the labouring classes are bread-winners and though they may have a proper and good supply of milk they cannot for obvious reasons keep regular hours for feeding their infants; therefore in the course of time the good milk gets deteriorated in quality by being retained in the breasts for long hours. As a remedy he suggests the building of *chawls* for the mill operatives and nurseries in connexion with the mills where women can leave their infants in charge of good nurses and feed them at proper intervals. In discussing the different food substitutes for mother's milk, Mr. Bardi calls attention to the difficulty of obtaining a good supply of cow's milk, to the absence of control over milch cattle and their owners, and to the notorious fact that the people of Bombay are very badly off in the matter of their milk-supply. Mr. Bardi says that the milch cattle stables in many parts of Bombay display a state of affairs not at all creditable; they are ill-kept, ill-ventilated, ill-drained, overcrowded, unpaved or badly paved, and situated in populous localities—"the food given to the animals is generally of the coarsest and very often little more than stable refuse, and they are watered from the nearest dirty tank." The remedial means for the heavy mortality should, the writer suggests, be in the direction of—(1) adoption and enforcement of sanitary laws and measures; (2) education of the masses, with special reference to knowledge of the first principles of hygiene by tracts, lectures, and the like; (3) minimising the ill-effects of the necessary industrial conditions of the poor; and (4) the establishment of large lying-in asylums and the building of sanitary houses for the poor.

RECENT CENSUS PUBLICATIONS.

IN the course of last May two important blue-books were issued from the Census Office. The first consists of a volume of summary tables extending to 300 pages and showing the area and number of houses and of population (with details as to occupation) for England and Wales as a whole—the corresponding facts for the several counties having been published in 53 separate "county parts" at intervals during the previous two years. The second volume contains the census returns for the "Islands of the British Seas," separate details being given for (1) the Isle of Man, (2) Jersey, and (3) Guernsey and the adjacent islands. In a preface we are informed that although the results of the census were tabulated, analysed, and published in England and the schedules and other necessary documents were supplied by our Census Office, nevertheless the enumeration was actually carried out locally by the authorities of the several islands concerned. The ground covered by the present volume is similar in character to that of the corresponding volume issued after the census of 1891; according to the introductory note, however, the tables relating to the occupations of the islanders have, in common with those of the mother country, been considerably elaborated and a table has been added, identical in form with the English table, showing the ages of married and also of unmarried people in each of the islands included in the returns. To the student of statistics the blue-book first referred to may be considered in some respects the most useful publication of the census. The county parts will, of course, be referred to for minute local details concerning those areas, especially

when the alphabetical index is available, the publication of which is promised at an early date; but for the ordinary reader the summary tables will furnish all the information required for a general survey of the results of the recent census. In a work of such colossal proportions as the present, involving the preparation and seeing through the press of not less than 53 folio volumes, each containing at least 37 full-page tables, it would be unreasonable to expect complete freedom from mistakes; but we are willing to admit that the table of *errata* which forms the concluding portion of the present volume is not more extensive than might have been anticipated, having regard to the complex nature of the undertaking. Like its predecessors the present volume is signed by Mr. W. C. Dunbar, Registrar-General, by Mr. N. A. Humphreys, and by Dr. J. F. W. Tatham. In a brief introductory note the signatories state that the final report on the census is now in hand and will be published with all despatch compatible with the exercise of that care which the importance of the work demands.

DIPHTHERIA AND PREGNANCY.

The *Gazette Hebdomadaire des Sciences Médicales de Bordeaux* of May 17th contains an interesting paper on the above subject by Dr. Chambrelent and Dr. Micheleau in which the following case is described. A woman, aged 44 years, eight months pregnant, was admitted to hospital on March 1st. Eight days previously her throat became sore and hoarseness, aphonia, and difficulty in breathing soon followed. On admission there were all the signs of laryngeal obstruction, stridor, retraction of the supraclavicular and suprasternal fossæ, and turgescent cervical veins. The throat was red but no false membranes were seen. The temperature was 101·4° F. and the pulse was 120. Antitoxin was injected. Two hours after admission the dyspnœa had so increased that tracheotomy was necessary and membrane was expelled through the tracheotomy wound. A second injection of antitoxin was given and the respiration became almost normal. On the following day the temperature had fallen to 97·7° and the pulse to 100. The fœtal heart was heard. On the next morning the dyspnœa recurred. On the left side of the chest no respiratory sounds could be heard and on the right the respiratory murmur was weak. Aspiration through the tracheal wound failed to remove any membrane. The fœtal heart was distinctly heard. After consultation it was decided to induce labour and to make arrangements for Cæsarean section should death supervene. A long œsophageal bougie was introduced into the uterus. The bougie fell out after two and a half hours and no uterine contractions were apparent. Death occurred at 3 A.M. on the following morning. An attempt to introduce the hand into the uterus in order to perform version and to extract the fœtus failed since the os was not dilatable. Cæsarean section was at once performed. The fœtus showed no signs of life and all means of resuscitation failed. The necropsy showed that the larynx was covered with false membrane but that the trachea was free from it. The bronchi as far as the branches of medium calibre were lined with membrane. The lungs were emphysematous and there was emphysema of the mediastinal tissue. In the small bronchi was sero-purulent exudation. The false membranes yielded on cultivation the long bacillus diphtheriæ and diplococci. Very few cases of diphtheria in pregnancy have been recorded. All writers regard the condition as grave. Of 12 published cases in which antitoxin was not used six were fatal but four cases in which it was used were all successful. An interesting point is the great tendency of the diphtheritic process to extend to the larynx, as in children, and contrary to what is usual in adults. Thus in 12 cases published before the introduction of antitoxin tracheotomy had to be performed seven times. It is noteworthy that in the case now recorded there were no signs of uterine contraction although the asphyxia of pulmonary disease is regarded as one of the most important causes of abortion. The diphtheria bacillus was not found in the fœtus but its toxins appeared to have produced profound alterations in the fœtal organs. The myocardium showed signs of degeneration. The spleen was congested and the seat of interstitial hæmorrhages. The liver also showed interstitial hæmorrhages, accumulations of leucocytes in the portal spaces, and degeneration of the hepatic cells. The kidneys showed similar but less marked changes. In the lungs there were interstitial hæmorrhages.

THE DISTRIBUTION OF PLAGUE.

As regards the Cape Colony the acting medical officer of health states that for the week ending May 16th the condition of the various places mentioned below with respect to plague was as follows. At the quarantine station, Saldanha Bay, 2 Asiatic males remained under treatment in the hospital, both being convalescent. At Port Elizabeth 2 cases of plague were discovered—namely, 2 native males on May 11th and 13th respectively, 1 being found dead. At the Plague Hospital 1 European female, 2 native males, and 1 native female were discharged recovered during the week, leaving 10 cases under treatment. Plague-infected rats continued to be found in the town during the week. At East London 3 cases of plague were discovered—namely, 1 Indian male on May 10th, 1 coloured male on the 15th, and 1 European female on the 16th. At the Plague Hospital 1 coloured male and 1 native male died during the week, leaving 3 cases under treatment. At King William's Town 1 case of plague was discovered—namely, 1 European female on May 10th. At the Plague Hospital 1 native male died and 1 European female was discharged recovered, leaving 5 cases under treatment. At Graaff-Reinet and Burghersdorp no cases of plague and no plague-infected rats were discovered during the week. At Queenstown plague-infected rats were discovered in the town. In the Cathcart district during the week a plague-infected rat was discovered in the police camp, about one and a half miles from Thomas River Station. As regards Hong-Kong a telegram from the Governor, received at the Colonial Office on June 4th, states that for the week ending May 30th there were 123 cases of plague, 4 in Europeans, with 103 deaths.

EMPYEMA NECESSITATIS WITH THREE PULSATING TUMOURS.

IN the *New York Medical Journal* of May 9th Dr. F. P. Henry has re-published a case which he recorded in the Transactions of the Philadelphia County Medical Society for 1881. He has done so wisely, as the case is very uncommon and is practically inaccessible to students of the rare condition of pulsating empyema. A woman, aged 30 years, was admitted to hospital on April 14th, 1880. On the left side of the chest were three strongly pulsating tumours—one in the mammary region of about the size of half a large orange, a smaller conical one in the eighth intercostal space in a line with the anterior axillary border, and the largest one, four inches in diameter, in the postero-inferior region. On palpating the first tumour splashing sounds were produced and a sensation was felt like that of handling a hernia. Evidently the tumour contained both air and fluid. The left chest was dull posteriorly as high as the middle of the scapula. The line of dulness curved downwards and forwards. The whole pulmonary area in front was almost tympanitic and the anterior tumour was decidedly tympanitic. The semilunar tympanitic area of Traube was absolutely dull. The respiration was amphoric except over the posterior tumour. Paracentesis at the site of the conical tumour yielded more than a quart of thick offensive pus. As some air escaped it was thought best to desist. The

pulsation in the anterior tumour and the gurgling on palpation ceased and the posterior tumour greatly diminished in tension. The empyema was drained. Of the further history all that is known is that the patient was alive a year afterwards. Only 83 cases of pulsating pleurisy and only one other case with three pulsating tumours appear to have been recorded.

THE ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES.

WE have the pleasure of announcing that the Enno Sander Prize of the above association has this year been conferred upon a British military surgeon—namely, Major Frederick Smith, D.S.O., R.A.M.C. The subject of Major Smith's essay is "The Differential Diagnosis of Typhoid Fever in its Earliest Stages." The announcement of the fact that the prize went for this year to an officer of the British service was received by his American *confrères* with generous and prolonged applause and much pleasure was generally expressed at the honour which the association was enabled to show to a member of a service towards which all American medical officers feel so kindly. We are sure that this fact will go to cement still further the friendly relations which exist between Great Britain and the United States and to advance the labours of the members of the medical departments of the two great English-speaking nations of the world.

THE annual general meeting of the Poor-law Medical Officers' Association of England and Wales will take place on Tuesday, June 30th, at the Trocadéro, Piccadilly-circus, London, W., at 6.30 P.M. At 7.30 the members and their friends will dine together, Dr. Farquharson, M.P., the President, being in the chair. Any Poor-law medical officer desiring to be present is requested to communicate with the honorary secretary, Dr. M. Greenwood, 9, Copthall-avenue, E.C.

THE annual banquet of the Association of British Postal Medical Officers will take place on Friday, July 17th, at 7 for 7.30 P.M., in the Whitehall Rooms of the Hôtel Métropole, "to meet the Right Honourable Austen Chamberlain, M.P., His Majesty's Postmaster-General."

THE Cavendish Lecture of the West London Medico-Chirurgical Society will be delivered on Friday, June 26th, in the town hall, Hammersmith, at 8.30 P.M., by Professor T. Clifford Allbutt, the subject being Atheroma of the Ascending Aorta.

THE provincial meeting of the Society for the Study of Disease in Children will be held at Brighton on Saturday, June 20th. Several communications on interesting subjects have been promised.

A DINNER of the Durham University Medical Graduates' Association will be held at the Café Royal, Regent-street, London, W., on Thursday, June 25th, at 7.30 P.M.

THE sixty-fourth annual dinner of the Irish Medical Association will be held in the town hall, Enniskillen, on Wednesday, June 17th, at 7.45 P.M.

WEST CORNWALL INFIRMARY, PENZANCE.—At a meeting of the subscribers to this institution held on May 23rd, under the presidency of Prebendary Hedgeland, it was decided to enlarge the building. A quarter of an acre of land to the north of the infirmary will be purchased and the extension will provide for six more beds, the widening of the corridors, and other improvements. The cost of the undertaking is estimated at £4000.

THE ROYAL MEDICAL BENEVOLENT COLLEGE, EPSOM.

THE twenty-ninth festival dinner of the Royal Medical Benevolent College, Epsom, was held on June 10th in the Grand Hall of the Hotel Cecil, Strand, London. The chair was taken by H.R.H. the PRINCE OF WALES.

After the toast of "The King" had been proposed by the PRINCE OF WALES and duly honoured, Sir WILLIAM S. CHURCH, Bart, K.C.B., President of the Royal College of Physicians of London, proposed the toast of "Her Majesty Queen Alexandra, their Royal Highnesses the Prince and Princess of Wales, and the other Members of the Royal Family." He said that the Queen when she first came to this land captivated the people by her beauty, but since then the nation had learned to love her for herself. He thanked the Prince of Wales for filling the office of chairman on that occasion and reminded those present that the King was with the Prince Consort in 1855 when Epsom College was opened and as recently as 1895 the King had visited the College and laid the foundation-stone of the lower school. He concluded by describing how Princess Christian had worked for the improvement of hospital management and nursing.

The PRINCE OF WALES, in acknowledging the toast, said: In the name of the Queen and of the Princess of Wales and the other members of my family and on my own behalf I beg to thank Sir William Church for the very kind and flattering terms which he has used in proposing this toast and I am, indeed, most grateful to you all for the hearty reception which you have given to it. I know from the Queen and the other members of my family that the medical profession may ever rely on hearty sympathy and ready support in their work and in every undertaking which may tend to mitigate the suffering of our fellow creatures. So far as the Royal Medical Benevolent College is concerned I can assure you that the Queen remembers with great pleasure the visit she paid to the College with the King when he laid the foundation-stone of the lower school eight years ago. As Sir William Church has reminded us the Prince Consort opened the College almost 50 years ago and on that occasion he was accompanied by the King. I believe that it was not very many years ago when the King took the chair here at one of your festival dinners and on that occasion he got the largest collection of those days and I hope that to-night we shall beat it. I trust that my presence here this evening will be regarded as a proof that I continue to take the same interest in the College that my family have done since its foundation. As president of five of our large London hospitals I know what splendid service is rendered by the medical profession to those institutions. Also as president of the King's Hospital Fund for London I fully realise the valuable gift of their experience and time in assisting those who control the administration of the Fund. This assistance is most especially valuable in the all-important work of visiting and reporting upon the hospitals that are desirous of receiving help from the Fund. Deeply impressed as I am with what we owe to the doctors and surgeons of this country it gives me the greatest pleasure to take the chair here this evening, and I once more thank you all for the very hearty manner in which you have received this toast and for the kind way in which you have come here this evening to support me by your presence.

The PRINCE OF WALES, again rising, said: I have now the pleasure of proposing the toast of the evening, which is "Success to the Royal Medical Benevolent College." No excuse is necessary for pleading the cause on behalf of which we are assembled here to-night. The charitable institutions of our country are among those national characteristics of which we are justly proud; and I can hardly imagine that there are any more deserving of public support than those whose object is to help members of the medical profession or their families, who, through misfortune or otherwise, are brought to reduced circumstances. I feel that I am uttering a mere commonplace in stating that we all owe a debt of gratitude to the doctor. We cannot get on without him. He is with us on our entry into the world and when we leave it and is our confidential friend from the cradle to the grave. We consult him, confide in him, trust him, though he often has to tell us

disagreeable truths. There are few of us who have not reason to be deeply grateful for his knowledge, tender care, and patient watchfulness, by which we have been brought through a severe and dangerous illness. Certainly I myself can speak feelingly as one of that number. But I go further: for over and above our individual thanks you will, I know, agree that our medical profession has earned the heartfelt gratitude of the whole nation; for, thanks to the marvellous progress in medicine and surgery and individual knowledge and skill, the life of our beloved Sovereign was, under the blessing of Providence, preserved to us during the past year. We must also remember, in estimating the splendid work accomplished by our hospitals, that nine-tenths of the medical advice—and this is certainly the best in the country—is given practically gratuitously. But the debt to the doctor is not merely one which is to be considered as discharged as soon as his bill for professional service has been paid. There remains the sense of gratitude which, I am glad to say, often not only finds expression in a sincere and lasting friendship between doctor and patient, but in thank-offerings by which this institution with other medical charities has materially benefited. The question may be asked whether the medical profession should not be able to support its own charities without appealing to the public. In answer I would remind you that the popular idea that doctors are rich men is a very erroneous one. True it is that there are a few wealthy members of the profession, but these you may probably count on your fingers. I know, also, that great generosity is shown among these few to their necessitous brothers. Some are able to make a fair income and perhaps to save money, but too many are underpaid and struggle in an overstocked market, and the fact remains that there is an enormous residuum of medical men who live only from hand to mouth. Another common idea seems to be that doctors live for ever. Unfortunately here again is another fallacy. Too many succumb to the hard life of exposure by which their constitutions are undermined or to the dangers of infection. The two following cases are among those recently before the notice of the College. A medical man was summoned to go over the Wiltshire Downs to see a child who had been burned. On the way there he himself was struck by lightning and killed, leaving a widow and large family. A surgeon-major in the Army Medical Staff was compelled to retire from the service on account of complete loss of sight resulting from overwork and hardship on active service. He has a wife and five young children, is not strong himself, possesses but limited means, and partly supports his mother. But it is not only with these conditions of everyday life that the medical practitioner has to contend. We know how in actual warfare he risks and indeed often loses his life while tending those who have fallen in battle and we must not forget that many (I know that some of them are here to-night) gave up the comforts of home life and, regardless of any pecuniary sacrifice, volunteered for service in South Africa. To meet this distress about £14,000 a year is given by three great medical societies in the metropolis—the Medical Benevolent Fund, of which my old friend Sir William H. Broadbent is president, the Society for the Relief of Widows and Orphans of Medical Men, and the Epsom Medical College. The College was founded by Mr. John Propert in 1855 to supply the want which his experience as a family medical practitioner forced upon his notice. The school supports 50 boys on the foundation, the boys being clothed, educated and maintained. There are also 50 aged or necessitous medical men or their widows who receive £30 a year and to maintain these £8000 a year is necessary. I am very glad to have had the opportunity yesterday of personally visiting the College at Epsom. I was delighted with everything that I saw there; indeed, one could not help feeling that the wishes and aspirations of the founder have been to a great extent fulfilled. I heartily congratulate the head master, Mr. Hart Smith, on the happy and healthy-looking boys under his charge whom I had the pleasure of seeing in the cricket field. But I wish it to be clearly understood that this appeal is not for the school proper, which is conducted as a public school and is self-supporting. It is for necessary funds to support its medical foundation—that is, the education of the 50 foundationers and to maintain the pensions to which I have just referred. And I am glad to be able to state that there are strong reasons for believing that if we receive to-night liberal support it will not be necessary to have recourse to further special appeals. My only regret is that this appeal has not been urged by someone more eloquent than myself. But no one could speak with more profound conviction than I do of the worthiness of the claim which the Royal Medical Benevolent College has upon the sympathy and generosity of us all. I now beg to propose, "Success to the Royal Medical Benevolent College," coupling with it the names of the president, my noble friend Lord Rosebery, and the treasurer, Dr. C. Holman. In its president the institution has to be congratulated. For Lord Rosebery, while ably fulfilling the duties of that office, proves himself to be a true friend and neighbour, showing a keen interest in the general welfare of the College as well as in the boys, their work and their recreation. I feel it presumptuous for me to speak about Dr. Holman. His name is familiar to everyone who knows Epsom College; he is the mainspring of its life. Associated with the charity since its foundation, he has for 16 years worked unceasingly as treasurer and has left a lasting proof of his efforts as an honorary local secretary in the £8000 which he has collected during 38 years in that office

This was responded to by Lord ROSEBERY, the President of the College, who said: My task on this occasion is happily a very small and insignificant one, for it is only to obliterate myself as soon as possible in favour of my working partner, Dr. Holman. Indeed, Sir, if I had had any idea of making an extended speech that would have been dispelled by the one to which we have just listened. The only part of that speech which I venture to disagree with is that in which you said that there can be a better and more effective chairman than yourself. I venture to challenge any orator, however practised he may be, to vie with the pathetic, the eloquent, and what is more the true, terms in which you have spoken of the medical profession. We have so many of them here to-night that I hardly dare to think and I scarcely venture to conjecture what may be the effect on their patients in London. The titled cynics of the profession in whose immediate neighbourhood I am sitting have given vent to their conjectures on the subject, but I will not venture to imitate them. I will only hope that all may be for the best—and I think that I will pause there for fear I should give utterance to some imprudent sentiment. I confess that I do not like to call myself an impostor, yet this is the thought that is present in my mind now, but I am, strange as it may seem, an ornamental figure on this occasion. I am indeed President of Epsom College, but I am responsible neither for its teaching nor for its discipline as other presidents of other colleges are. If I were I might have to give a less favourable report on both than I conscientiously can on the present occasion. If I had my way I should like to exchange my office with that of the Bishop of Winchester and become a visitor of the College, because in that capacity I am genuine and frequent and should not blush to reply on behalf of the College as I do now. I am indeed at Epsom happily a neighbour and I have the great pleasure and privilege of being frequently a visitor of Epsom College owing to local circumstances, much more frequently I suspect than any occupant of the See of Winchester. Well, I can offer no report on the studies of the place and Mr. Hart Smith gives me no access to them and never asks my opinion or judgment on them, but as regards the more athletic features of the College I can say from some experience—as you, Sir, have been able to say from your experience of yesterday—that a finer and healthier and manlier lot of students exist in no other educational establishment; they live in the finest air in the world, they are kept carefully exempt from the temptations which are associated with the name of Epsom and they are, I believe, prepared to go anywhere or to do anything. There is only one drawback connected with the College and I hope that it may be the result of this meeting to-night to remove that drawback: it is the word "benevolent" in the title which I think is a considerable drawback to its success. I have lived for some years as President of the Royal Medical Benevolent College of Epsom and if I can die president of the Royal Medical College of Epsom I shall be content. I hope, Sir, it may be your destiny to-night to accomplish that great work. There have been many chairmen before you and there have been many successful banquets before this one, but I hope that when this is over we shall be able to say in the words of the psalm of triumph that whereas the chairmen before you have collected their thousands you have collected your tens of thousands.

Dr. HOLMAN, the treasurer, said that on behalf of his colleagues on the council of Epsom College he thanked His Royal Highness for his presence and for the

terms in which he had commended the cause of the pensioners and foundation scholars of Epsom College. The present gathering was the largest ever seen in the metropolis in the cause of a medical charity and he hoped that His Royal Highness would accept it as the grateful recognition of his kindness in presiding. Personally he thanked His Royal Highness warmly for his speech, it contained much of what had been his opinion for so many years of the relation of the public with the medical profession which coming from His Royal Highness would, he hoped, leave a stronger and more lasting impression than coming from any medical man. He gratefully acknowledged the practical sympathy received from some members of the public who had recognised the services the medical profession rendered to society and to the public health. But since he had been engaged in preparing for this dinner he had come to handgrip with an attitude of mind which had apparently militated against a more generous recognition of the claims which the medical profession might justly make upon every section of society. That His Royal Highness should have recognised and placed them before that meeting was a matter of intense satisfaction. His Royal Highness had touched upon the question of medical men who earned large incomes. These men began to earn late, their work was personal and their harvest-time was short and he, Dr. Holman, bore testimony that they gave generously for the relief of the necessitous of their profession. There was a considerable class who might give each year sums which they would not miss but who seemed to shrink from giving because the amount would look small. THE LANCET had stated how much good would accrue if 10*s.* a year were contributed by each medical man, but if every practitioner in the United Kingdom would give half-a-crown yearly there would be no further anxieties for Epsom College. He thanked His Royal Highness for recognising that there must be suffering, want, and distress amongst them; accident and disease must attend upon the practice of medicine and when the bread-winner was gone how terrible were the straits to which the widow and children of such a man might be reduced. He ventured to indorse His Royal Highness's position that the medical profession had claims upon the public which were not sufficiently recognised. Hospitals were built and maintained by the public. Was sufficient thought given to those by whose labours the relief of sickness and suffering was secured within their walls? The medical profession supplied the staff, but to be a physician or surgeon to a hospital did not insure success in private practice. He had the pleasure to announce that since the preparations for the dinner had been in hand the two daughters of the late Mr. Leach of Shaw, near Oldham, had given the council £1000 to found a Leach Memorial Scholarship of £50 a year tenable for four years to be awarded without competition to a boy requiring assistance to enter at either Oxford or Cambridge, preference being always given to the orphan sons of medical men. The Anstie Memorial Scholarship held for the like term would now enable a scholarship to be awarded every two years.

The grand total of the subscription list was then stated to amount to £6526, this announcement being received with cheers.

The company separated after the Prince of Wales had departed, his exit being accompanied by the singing of "For He's a Jolly Good Fellow."

ROYAL INSTITUTION.—A general monthly meeting of the members of the Royal Institution was held on June 8th, Sir James Crichton Browne, treasurer and vice-president, being in the chair. Sir Walter J. Sendall, G.C.M.G., was elected a member.

CORK MEDICAL AND SURGICAL SOCIETY.—The annual general meeting of the members of this society was held on May 27th, Dr. P. T. O'Sullivan, the President, being in the chair. The statement of accounts showed a balance of £68 to the credit of the society. The following officers were elected for next session. President: Dr. J. Cotter. Vice-President: Dr. N. Henry Hobart. Honorary secretary: Dr. D. J. O'Connor. Honorary treasurer: Dr. P. J. O'Brien. Council: Dr. P. T. O'Sullivan (retiring President), Dr. C. Y. Pearson, Dr. W. E Ashley Cummins, Dr. T. G. Atkins, Dr. H. R. Townsend, Mr. E Murphy, Mr. P. G. Lee, and Dr. Lucy E. Smith. Dr. N. J. Hobart, who has retired from active practice after a professional career of 57 years, was unanimously elected an honorary life member of the society.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

THE KING AND QUEEN AT ST. PAUL'S CATHEDRAL.

THE very real interest taken by the King in the welfare of the hospitals and dispensaries of the metropolis was further emphasised by the visit of His Majesty to St. Paul's Cathedral on Sunday afternoon last, when a collection was made on behalf of the Metropolitan Hospital Sunday Fund, and when there were also present the Queen, the Prince and Princess of Wales, the Duke and Duchess of Connaught, the Princess Henry of Battenberg, the Princess Christian, the Duke of Cambridge, and other members of the Royal Family. The Cathedral was well filled long before the commencement of Evensong at 3.15 The congregation was largely composed of the middle and working classes, who joined their intercessions with those of their Sovereign and the Royal Family on behalf of the good work done in the hospitals and dispensaries of the ever-extending metropolis.

The service was the ordinary Evensong of the day with the interpolation in the Prayer for all Sorts and Conditions of Men of the words "especially those in the London hospitals for whom our prayers are desired," and a commendably brief and appropriate sermon by the Bishop of Stepney from the text, St. Luke xxii., 24, 25, and 26: "And there was also a strife among them, which of them should be accounted the greatest. And He said unto them, The kings of the Gentiles exercise lordship over them; and they that exercise authority upon them are called benefactors. But ye shall not be so: but he that is greatest among you, let him be as the younger; and he that is chief, as he that doth serve." In the course of his remarks the Bishop observed that there was nothing great in position unless it was used as a power for wider service; nothing great in wealth unless it was used as an opportunity for helping others. If this were forgotten, even though they seemed to succeed, they were making a great failure—they were abdicating the true royalty of human life, its capacity of compassion. And on that day an appeal came for their compassion with peculiar force and urgency. Hospital Sunday brought before their imagination the vast tide of pain and suffering which their hospitals were trying with such noble patience and devotion to stem. If one poor sufferer were brought before them there was not one of them who would not do what he could to help. But it was not one poor sufferer, but the 105,000 in-patients and the 1,670,000 out-patients in the London hospitals who were, as it were, laid at their door. And to lend, if it might be, force to their plea, their Gracious King and Queen with the members of the Royal house had associated themselves with it by their presence, illustrating the true royalty of compassion, proving once again that it needed no proof that here in England "the throne is upholden by mercy." Such an appeal on behalf of the poor and sick must act as a test of the real worth of their character. If it left them unmoved, asking only what was the least that could be expected of them, then their poverty of life was discovered; it was plain that the disease of selfishness was upon them. On the other hand, there was still, in spite of all their sins and shortcomings, some element of greatness left in them, something God-given and God-like, if their hearts moved forth to meet the appeal in the ardour of compassion. What might not be done to establish on a sure foundation those homes of mercy, to banish the shadow of anxiety which haunted the efforts of the devoted men who were responsible for them, if every person in that great congregation, rich and poor alike, asked, in eagerness for the answer, "What can I do, by thought and influence and self-denial, for the hospitals of London?" Lastly, if it were true of each individual man that his real worth was tested by his capacity of compassion, it was equally true of the community to which he belonged. The greatness of a nation consisted not so much in the number of its people or the extent of its territory or the mass of its wealth as in the strength and width and justice of its compassion. They were proud of the greatness of the city of London, but its size was a thing to appal, not to uplift, unless it spoke of one body in which the strong and the weak, the rich and the poor, were bound together by the ties of mutual help and common service. Its wealth was a mere golden idol upon feet of merest clay unless it was used as a trust for the public good, an opportunity for the

exercise of compassion. Their hospitals stood in their midst as a constant reminder, "lest we forget, lest we forget" the true greatness of the city: St. Bartholomew's, witnessing in the very centre of the city to the kindness of an olden time; the London Hospital, rising above the crowded streets of the East-end; St. Thomas's, confronting the centre of the Empire's labours; St. George's, standing in mute appeal as the stream of wealth and luxury flowed around it. The hospitals were voices calling to London, "Remember, O remember, the Lord thy God; remember the trust with which He has charged thee; remember the poor, the suffering, and the stranger at thy gates." There were many signs that the city was not deaf to the call—the King's Fund, the generosity of men such as he who had again come forward to stimulate his fellow-citizens, the steady growth of the Hospital Sunday Fund. All these were tokens of a quickening of the public conscience. But could it be said that the wealth of London had yet risen to the height of its opportunity? If it had, would it be possible that the annual deficit of the hospitals should be £250,000? Already there were ominous declarations that the strain of raising funds had reached the limit of endurance and that ere long the hospitals of London must turn to the compulsory help of the rates. Doubtless a city could exercise much of its common service through its rates. Doubtless the skill of the physicians and the devotion of the nurses would not fail if the hospitals became public institutions. But good which was done under the compulsion of "must" could never have the moral worth of good which was done under the obligation of "ought." The performance of a public duty was a thing far finer, far more uplifting, when it was freely offered. To remove from the walls of our hospitals the old familiar words, "Supported by voluntary contributions," would be an act of moral retreat on the part of a great and wealthy city. The appeal of the hospitals for more assured and more continuous support was therefore an appeal to the honour of the city. God grant that that notable day might mark the beginning of a more resolute and sustained effort by the great city of London to prove that its power, like the power of God, from Whom it came and to Whom it was responsible, was declared most chiefly in showing mercy and pity.

The collection was taken by a staff of some 60 persons and realised £4300.

SPECIAL MEETING AT THE MANSION HOUSE.

A meeting of the members and supporters of the Metropolitan Hospital Sunday Fund was held at the Mansion House on June 8th, under the presidency of the LORD MAYOR of LONDON, to further the interest in our hospitals and medical charities. Among those present on the platform were the Lady Mayoress, the Archbishop of Canterbury, Sir R. Douglas Powell, Bart., K.C.V.O., Sir Frederick Treves, Bart., K.C.V.O., C.B., Sir William S. Church, Bart., K.C.B., Sir Sydney Waterlow, Bart., Sir William H. Broadbent, Bart., K.C.V.O., Mr. Wakley, Dr. J. G. Glover, the Archdeacon of London, Monsignor Stanley, Mr. Richard B. Martin, M.P., Rev. Prebendary Ingram, Mr. R. de Q. Quincey, Mr. Thomas Bryant, Alderman and Sheriff Sir G. Truscott, Rev. Prebendary Ridgeway, Captain A. Palliser, Rev. A. Harlow, Sheriff Sir Thomas Brooke Hitching, Rev. G. H. Pearce, Rev. Canon McCormick, Rev. C. H. Grundy, and Mr. F. H. Norman.

Letters of regret for absence were received from the Bishop of London, the Bishop of Rochester, the Bishop of St. Albans, the Bishop of Islington, the Bishop of Kensington, the Bishop of Barking, the Bishop of Southwark, the Dean of Windsor, Monsignor Poyer, the Dean of Westminster, the Rev. Canon Fleming, Dr. Hermann Adler (Chief Rabbi), the Duke of Norfolk, Lord Stamford, Lord Sandhurst, Sir Edwin Durning Lawrence, Sir Savile Crossley, Bart., M.P., Sir Horatio Davies, M.P., Mr. C. E. Tritton, M.P., and others.

The LORD MAYOR in opening the proceedings said that they had met with the object of advocating the claims of the Hospital Sunday Fund and he was pleased to tell his hearers that an excellent beginning had been made by the collection at St. Paul's Cathedral on June 7th which amounted to £4300. How greatly this result was owing to the action of the King and Queen only those closely associated with the Fund could know, and he sincerely hoped and believed that the noble example set by their Majesties would permeate all congregations on June 14th so that their Majesties might have the gratification of knowing that their work had not been in vain and that the collection this year would be a record one.

The Archbishop of CANTERBURY, in moving

> That in view of the great interest taken by their Majesties in promoting the welfare of the metropolitan hospitals this meeting pledges itself to use every effort to make the Hospital Sunday collection a "record" one this year,

said it was necessary to emphasise the fact that the corporate life of which they were ordinarily proud was not an empty dream and that those who deliberately set on one side the claims of the London hospitals were placing themselves outside the pale of citizenship altogether. So definite was the call upon them all, and so real and certain were the needs, that he failed to understand the position of those who, while claiming the position and responsibilities of their common life, did not respond to that call. He knew of no other way in which the responsibility of the strong for the due care of the weak could be so obviously shown and exercised as by supporting the Fund which brought them together that day. Chivalry was the first characteristic of some centuries of their nation's life. A good many years ago chivalry was defined as "the reverence of strength for weakness." They were showing that reverence in pleading for the London hospitals. Who would not be chivalrous? Nearly 400 years ago, in his "Utopia," Sir Thomas More set forth his idea of what was obviously the right and proper way in which a nation with great cities should carry on its work and a good many of those present would no doubt recollect the emphasis which he laid on the part that hospitals must take in the life of his ideal community. In the second book of the "Utopia" were to be found the following words:—

> For in the circuite of the citie, a litle without the walles, they have iiii. hospitalles, so bigge, so wyde, so ample, and so large, that they may seme iiii. litle townes, which were devised of that bignes partely to thintent the sycke, be they never so many in numbre, should not lye to thronge or strayte, and therefore uneasely, and incommodiously: and partely that they which were taken and holden with contagious diseases, suche as be wonte by infection to crepe from one to another, myght be layde apart farre from the company of the residue. These hospitalles be so wel appointed, and with al thinges necessary to health so furnished, and more over so diligent attendaunce through the continual presence of cunning phisitians is geven, that though no man be sent thether against his will, yet notwithstandinge there is no sicke persone in al the citie that had not rather lye there then at home in his owne house.

From the statistics which they held in their hands his hearers would see how far short London fell four centuries later of the ideals set forward even in Tudor times as regarded either the amplitude of our supply or the necessary funds for its maintenance. But in one other respect we had realised to the full the ideal of the great thinker of the sixteenth century, for we should find it hard to mend the condition of things as regarded what he called "diligent attendance" and "continual presence of cunning phisitians" who were there, and in these later days we had devised something of which Sir Thomas More never dreamed in that great complement to the physicians' work—the presence of a devoted band of nurses. A perusal of the rules relating to nursing 100 years ago would show how much we owed in the present day to the skill of thousands of competent and devoted women who had learned their art in the hospitals. How was it, the Archbishop asked, that the necessity arose year by year to go through the annual process of absolutely entreating the public to do so obvious a duty as the supply of the necessary funds for the maintenance of our hospitals? It was not because people who really knew did not care. It was because those who ought to care did not know and it appeared practically impossible to bring the facts home to them. A few years ago when we were at war, as soon as the needs of the sick and wounded were made clear to England, there was no lack of money to supply those needs. But in the ordinary round of our common prosaic life the needs of our hospitals at home slip out of sight. If we realised how London was crying out at the present time for help for the sick and suffering in our hospitals the miserable annual dole of £50,000 or £60,000 would be multiplied by ten within a week. It would, however, be wrong not to recognise the amount of good that was being done by no small number of rich people quite outside the range of the Hospital Sunday Fund. For the work of these people they

were grateful. He hoped that the outcome of the meeting would be that those whose duty it was to plead for the poor would not rest content until they had definitely impressed the public with the duty which the corporate life imposed upon them.

Sir R. DOUGLAS POWELL, in seconding the motion, referred to the fact that the King had given his sympathy and support to the Metropolitan Hospital Sunday Fund since its foundation, a fact which showed the worthiness of the charity. The committee of the Fund consisted of prominent and well-known men of all denominations who devoted their skill and time to the work of the distribution of the Fund. The laws of the constitution of the Fund enacted that the participating hospitals should have their accounts properly kept and there was a clause in one of the laws which insisted upon the necessity of hospital managers seeing that their charity was not abused. These facts showed how admirably the Fund was administered. As to the educational value of hospitals he felt sure that any patient who entered the wards of our healing institutions could not fail to be filled with the spirit of order and cleanliness. In the wards of the hospitals he would also learn self-denial and self-restraint, virtues which, perhaps, he had never thought of before. The education gained in the wards of the hospital would also, in all probability, be reflected in the patient's family life. In addition to the satisfaction of helping the suffering poor, those who subscribed to our healing institutions should remember that the large and well-equipped hospitals were the fertile centres of advancing medical science. Cases that were treated in the hospitals frequently formed the subject of discussion and interest and valuable information was thus spread among medical men throughout the country. Thus those who were able to subscribe to our hospitals would reap a reward in their hour of need. With the advance of medicine and surgery hospital expenses necessarily increased. At one of the hospitals to which he (Sir Douglas Powell) had the honour of being attached £1200 had recently been spent in bacteriological and electrical installations but this outlay had given a tenfold return to the public in the advancement of medical science and the aids to treatment which they brought about. With this increase in the cost of hospitals and appliances better and quicker results were obtained for the patients. He could recall the time when many diseases, medical and surgical, but particularly the latter, used to occupy the beds in the hospital for six, eight, and 12 weeks; now the same cases were discharged in one-half, one-third, and even one-quarter of that time. Therefore, although the expenses might be increasing, the cost per patient, owing to the larger number passed through the same number of beds, was by no means proportionately the same. A short stay in hospital meant a lessened degree of suffering, a quicker return to home life meant a speedier return of wage-earning power, a vast gift to the community. With regard to the use of stimulants, the expenses of hospitals had been greatly diminished. The amount of stimulants given 30 years ago was greatly in excess of that which more recent experience had led them to recognise as useful and to-day alcoholic stimulants were definitely prescribed by physicians and their effects were jealously watched throughout the time the patient remained under treatment. Hundreds of pounds yearly were saved to the hospitals by this watchfulness on the part of those in authority. It might be said that if these institutions were of such public value why not make them rate-supported? Why, it might be asked, should busy, hard-working, and generous people have all this anxiety and trouble to raise funds to keep them going? Reasons might be urged in favour of such a change, but if hospitals were placed on a business footing in this way the qualities of love and mercy now associated with them would vanish and that would be a great loss. The Bishop of Stepney in his sermon at St. Paul's Cathedral on June 7th had said that good done under the compulsion of "must" had not the moral worth of that done under the compulsion of "ought." That represented very much what he (Sir Douglas Powell) wished to say. Let them still endeavour to go on rendering those deeds of mercy to the sick poor and he trusted that the splendid advocacy which many of them heard in St. Paul's Cathedral on June 7th would be repeated throughout London and the country next Sunday and that the response would be such that there would be no necessity for placing hospitals upon the rates.

Sir FREDERICK TREVES, who supported the motion, said that it was almost impossible to realise to what an enormous extent the work of the hospitals had been extended in the last 25 years, both in medicine and in surgery. 25 years ago the hospital was little more than a place in which a poor man could find shelter when ill or injured. It had now become an absolutely necessary institution in which to carry out methods used in treatment which a quarter of a century ago were entirely unknown. These included hypodermic injection, Roentgen rays, the serum treatment, the treatment by baths, the treatment by the Finsen light, and, above all, the treatment by operation. The extent of the increase in surgical treatment had been almost incredible. 20 years ago, the greatest hospital in the metropolis—the London Hospital—possessed only one operating theatre which was occupied only one day in the week. It now possessed five which were occupied every day. Hospitals at the present time appealed to an enormously increased section of the public. So elaborate were some of the methods of treatment that they could not be carried out at any other place except at a hospital. A broken limb was set under the X-ray light—and that could not be applied in the cottage of the artisan. 20 years ago the hospital was not a popular place. People had a dread of it and they had some reason for their dread, but now the pressure for admission into all the great London hospitals was so enormous that it was scarcely possible reasonably to cope with it. Treatment was extended in hospital to an increased section of the population which included people who might be said to represent almost the backbone of the country. The question might be asked, "What do the charitable public get in return for all their magnificent gifts beyond the satisfaction of having taken part in a great charitable act?" They obtained so much that the debt was repaid many times over. In this country all medical education lay in voluntary hospitals and the efficiency of the medical men who were in practice and who would be in practice in the future depended on the efficiency of our great hospitals. As soon as the hospitals languished from want of funds the effect would be immediate upon our children and grandchildren. Practically all research in matters dealing with treatment was carried out in our voluntary hospitals by persons at their own expense. They were all eager with excitement in the hope that in a little time a cure would be discovered for cancer. Could he mention any sum, however large, that would represent the value of the gift to the world of that piece of knowledge? It would be discovered, he had no doubt, by some private person in a voluntary hospital as a result of researches carried out there at his own expense and it would be presented to the world absolutely free. They might say that that had not come yet, but a thing as big as that had already come to pass Could any sum of money express what had been the worth to the world of the gift of antisepticism? It was not a mere question of saving pain but of saving life to a degree of which the significance had hardly yet been grasped. That was a free gift to the world by a man who discovered it as the result of researches conducted at his own expense in a voluntary hospital; and he was sure that Lord Lister would say that without the voluntary hospitals of this country—without that liberal attitude which the governing bodies had shown towards scientific work—antisepticism, with its magnificent results, might have been still unknown to the world. Therefore, he thought that, from the lowest point of view, those who had been most generous in supporting our voluntary hospitals could claim that they had had some return for their much-appreciated kindness. There was no more important monument to the British race than the hospitals supported by voluntary contributions and it would be a great loss with no corresponding advantages if the hospitals should become State-supported.

The motion was then agreed to.

Sir WILLIAM S. CHURCH moved a vote of thanks to the Lord Mayor which was seconded, in the absence through illness of Cardinal Vaughan, by Monsignor STANLEY and agreed to unanimously.

In his reply the LORD MAYOR said that the cause which they had met to promote was one in which all creeds participated and he expressed his regret that the Chief Rabbi was unable to be present in consequence of an accident which had befallen him. He (the Lord Mayor) particularly wished to point out that the Metropolitan Hospital Sunday Fund was as much the Fund of the poor man as of the rich man and contributions from a shilling and upwards would be thankfully received.

THE MEDICAL, SURGICAL, AND HYGIENIC EXHIBITION.

(*Concluded from p. 1613.*)

SURGICAL and sanitary appliances formed an important feature of the exhibition this year; under the former we may include electrical apparatus such as is now employed in a number of therapeutic applications and apparatus for the production of a rapid vibratory movement; under the latter may be mentioned examples of special sanitary ware for hospital use, filters, and disinfectants and soaps.

Messrs. Doulton and Co. (Lambeth, S.E.) devoted a good deal of space in the entrance hall to the exhibition of sanitary fittings specially designed for hospital use. Amongst the exhibits were the following: A hospital closet fixed so as to be clear of the floor on iron brackets imbedded in the pottery and provided with a vitreous enamelled pipe to connect the cistern to the closet; a white glazed fireclay sink to be used in the cleansing of either bed-pan or urine bottle and provided with a special combination of hot- and cold-water valves, so that the utensils may be washed out with water at any desired temperature; an elbow-action operating lavatory waste and supply, both being worked by the elbow, while the temperature of the water can be readily adjusted by the same means; and lastly, a white vitreous enamelled cast-iron mortuary table. Messrs. Hendry and Pattisson, Limited, (11, Hill's-place, Oxford-street, London, W.), exhibited a model of a hospital ward stove which supplies a constant stream of pure warm air to the ward besides affording the radiant heat of an open fire in the ordinary manner. It is claimed that the warmed air is not burnt or "devitalised." The stove certainly has a cheerful appearance and from its construction should be economical in use. The treatment of disease by radiant heat and light by the Dowsing method was demonstrated by the Dowsing Radiant Heat Co., Limited (24, Budge-row, Cannon-street, London, E.C.). Close by was a stall devoted to the exhibition of an automatic aerator by the British Automatic Aerators, Limited (Alderman's House, Alderman's Walk, Bishopsgate, London, E.C.). The arrangement enables the aeration of the ordinary water-supply to be made directly without agitation or pumping. The apparatus would seem to be admirably suited for hospital use and it is said that by means of this machine the cost of producing 2000 glasses of aerated water is 6*s.* 6*d.*, or at the rate of 24 glasses for one penny. The Berkefeld Filter Co., Limited (121, Oxford-street, London, W.), showed many forms of their well-known filter which provides a filtrate free from germs so long as proper attention is paid to its regular cleaning and sterilising. We noticed also a rapid tap filter which was shown by the Tap Filter Co. (134, Charing Cross-road, London, W.C.). The use of this filter certainly produces a clean bright water but no evidence is offered so far as we could ascertain as to its removing pathogenic organisms. Messrs. J. Defries and Sons (146 and 147, Houndsditch, London, E.) exhibited a number of Pasteur filters and some illustrations of the Equifex disinfector. Safest of all methods as regards sterilising water is distillation and for domestic purposes the Gem Pure Water Still of the Gem Supply Co., Limited (121, Newgate-street, London, E.C.), is convenient and useful. The hygienic steel bin of the Young's Patent Hygienic Bin Co. (72, Mark-lane, London, E.C.) should be mentioned as offering a clean receptacle for flour, &c., in which there are no internal corners or crevices. Particles cannot thus lodge to become stale and to infect, it may be, fresh additions to the bin. The London Necropolis Co. (121, Westminster Bridge-road, London, S.W.) devoted the space at their disposal to some illustrations and descriptive matter of the process of "natural interment" which they advocate. The coffin aids rather than hinders the natural dissolution of the body. There were not many examples of disinfectants shown. Messrs. Newton, Chambers and Co. (Thorncliff, near Sheffield) exhibited their izal preparations, while the stall of the Jeyes' Sanitary Compounds Co., Limited (64, Cannon-street, London, E.C.), was devoted chiefly to the exhibition of Jeyes' fluid disinfectants, sanitary powders, and creolin preparations. The comparatively new soap preparation known as "petol" is worth attention (Petol Limited, 86, Cannon-street, London, E.C.). The basis of this soap is said to be of a purely vegetable origin, the name suggesting peat as a source. The soap has peculiarly bland properties and is specially well adapted for delicate skins; it is disinfectant and antiseptic and several forms of it for toilet and medical use are prepared. An excellent soap also is Oowana soap, which has received attention in our Laboratory Records (Oowana, Limited, 205, Victoria-street, London, S.W.). Messrs. Wright, Layman, and Umney, Limited (Southwark, London, S.E.), exhibited specimens of Wright's coal tar soap, an excellent sanitary adjunct, as well as some special pharmaceutical preparations. Mr. James J. Hicks (10, Hatton-garden, London, E.C.) exhibited a great variety of clinical thermometers for the excellence of which his name is well known. The exhibit comprised also a sphygmometer (including a pocket form), opaque glass measures, and urinometers. Messrs. Leslies, Limited (Hopetoun House, Lloyd's-avenue, Fenchurch-street, London, E.C.), exhibited their well-known tape plasters besides antiseptic dressings, gauzes, strapping, bandages, and belts. Amongst the apparatus exhibited by the General Electric Co., Limited (71, Queen Victoria-street, London, E.C.), were complete sets for faradisation, for galvanism, for electrolysis and epilation, for galvano-cauterisation, for high-frequency treatment, and for the production of x rays. Surgical cutlery and instruments were well represented in the excellent assortment shown by Mr. W. K. Stacy (19, Newgate-street, London, E.C.). Messrs. H. W. Cox, Limited (9, Cursitor-street, Chancery-lane, London, E.C.), exhibited x-ray and high-frequency apparatus. We have more than once had occasion to mention the excellent results given in x-ray work by the apparatus of this firm. The Medical Supply Association (228, Gray's-inn-road, London, W.C.) showed a number of electro-medical apparatus and surgical instruments. The exhibit included the Gaiffe-Gallot electrolytic interrupter for working coils directly from a main alternating current. It is said that this interrupter gives a steady current and that no valves are required. The Improved Vibrator Co. (167, New Bond-street, London, W.) showed their apparatus for vibration treatment. The whole of the mechanism is inclosed in a flat circular case, and it can be regulated from the most gentle vibratory motion to any frequency desired. Messrs. Thomas Holland and Son (40, South Audley-street, Grosvenor-square, London, W.) exhibited their well-known natural-shaped boots and also their instep arch sock and bunion splint. Messrs. C. Bellack and Co. (12, Marble Arch, London, W.) exhibited a series of vibration instruments of which they are the makers; they are in particular the agents for the Muschik Vibrator. A very wide assortment of hospital appliances was exhibited by Messrs. Garrould (150 to 160, Edgware-road, Hyde Park, London, W.). The exhibit included antiseptic dressings, medical batteries, dissecting instruments, hypodermic syringes, invalid appliances, and many other forms of apparatus which go to make up the *armamentarium* of the surgeon and the nurse. The Marconi Wireless Telegraphy Co. (18, Finch-lane, London, E.C.) exhibited apparatus for x-ray work. This company gives special attention to the insulation upon which the efficiency of the coil so much depends. A great number of surgical instruments was exhibited by the Holborn Surgical Instrument Co. (26, Thavies-inn, Holborn-circus, London, E.C.). The appliances for the lame of the O'Connor Extension Co. (2, Bloomsbury-street, London, W.C.) are well known, including their new support for flat-foot and other appliances for weak or deformed feet. Amongst examples of sanitary clothing shown were the aertex cellular clothing (underwear) of the Cellular Clothing Co., Limited (72 and 73, Fore-street, London, E.C.), and the Kneipp mesh of the York St. Flax Spinning Co., Limited (2, Milk-street, London, E.C.). Examples of sanitary wood wool preparations, such as tissue, sheets, towelettes, and vaccination pads, were shown by the Sanitary Wood Wool Co. (26, Thavies-inn, Holborn-circus, London, E.C.). Natural mineral waters were represented in the purgative saline water of Friedrichshall (C. Opper and Co. 10 and 12, Milton-street, London, E.C.), and in the sparkling table water from the Rosbach springs (the Rosbach Co., 81, Commercial-road, Lambeth, London, S.E.). Finally, a few of the stalls were devoted to the exhibition of medical literature, the exhibits attracting general attention in this connexion being that of Messrs. D. Appleton and Co. (25, Bedford-street, Covent-garden, London, W.C.), the Scientific

Press, Limited (28 and 29, Southampton-street, Strand, London, W.C.), and Messrs. Rebman, Limited (129, Shaftesbury-avenue, Cambridge-circus, London, W.C.).

PREVENTION OF CONSUMPTION AND OTHER FORMS OF TUBERCULOSIS.

HEREFORDSHIRE.

THE latest branch of the National Association for the Prevention of Consumption and other Forms of Tuberculosis has been established in Herefordshire. The meeting at which the branch was inaugurated was held at Hereford on May 20th and was presided over by the Lord Lieutenant of the county, the audience, which numbered about 130 persons, having been brought together at the instance of the Herefordshire Medical Association. The first president of the branch is the Lord Lieutenant, and the Earl of Chesterfield, the Bishop of Hereford, the Dean of Hereford, the mayors of Hereford and Leominster, the Members of Parliament for the county, and the chairman of the county council have been invited to become vice-presidents. The meeting on May 20th was addressed by Dr. C. Theodore Williams who attended to represent the National Association. Dr. Williams spoke of the comparatively favourable position held by Herefordshire with regard to the death-rate from consumption and he attributed the diminution in the mortality from the disease over the whole of the United Kingdom as mainly due to the administration of the Factory Acts, to subsoil drainage, and to the improved condition of the working classes who now have better food and live in better houses than formerly. Although Dr. Williams admitted that the open-air treatment could be successfully carried out in private he advocated the erection of sanatoriums, because in them people were taught how to live and the influence which the patients exerted upon leaving such institutions did incalculable good among their acquaintances.

WINSLEY SANATORIUM.

On June 4th Lady Dickson-Poynder laid the foundation-stone of the Winsley Sanatorium for consumptive patients from the counties of Gloucester, Somerset, and Wilts. There was a large gathering which included the Bishop of Bristol, Sir John Dickson-Poynder, M.P., Lord Edmond Fitzmaurice, M.P., and Dr. L. A. Weatherly. An administrative block for 60 patients and bedrooms for 20 patients will be built at a cost of £6377 and as funds come in additional accommodation will be provided for patients until the full complement of 60 beds is made up. The funds in hand, after the purchase of the site and other expenses, are £6840 and the building and furnishing will involve an outlay of £8327. To complete the whole scheme about £9000 are required. The endowment of 15 beds in the institution has already been promised.

BELFAST.

The annual meeting of the Ulster Branch of the National Association for the Prevention of Consumption and other Forms of Tuberculosis was held on June 5th in the Medical Institute, College-square North, Belfast, Sir William Whitla being in the chair. The annual report, which was read by Mr. Robert Brown, the honorary secretary, stated that the death-rate from tuberculosis was decreasing in England and Wales but was increasing in Ireland, having risen from an average of 19 per 10,000 during the period 1870–75 to 23 per 10,000 in 1900. Dr. A. K. Chalmers, medical officer of health of Glasgow, delivered an address the title of which was "How to Reduce the Death-rate from Consumption."

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ELECTION OF MEMBERS OF COUNCIL.

THERE are only four candidates for the three vacancies on the Council. Mr. H. T. Butlin seeks re-election and Mr. Clinton T. Dent of St. George's Hospital, Mr. Frederic S. Eve of the London Hospital, and Mr. G. H. Makins of St. Thomas's Hospital are also applying. On only a few previous occasions have there been so few candidates.

Looking Back.

FROM

THE LANCET, *SATURDAY*, JUNE 11, 1825.

HOWEVER it may arise, whether because man is an imitative animal, or because his attention is roused to activity by the necessities which surround him, an ardent disposition to act *gregariously* may be plainly perceived; or, in other words, whatever may be commenced by one man is immediately prosecuted by a host of others. But this state of things does not commonly obtain long, some improvement is made, and other more inviting, or more profitable projects succeed, which forthwith, true as shadow to the substance, become the standing order of the day, till the bubble bursts, or till they are deposed to make room for some novel or more specious objects of pursuit, by which means the energies of the flock are directed into other and sometimes, though but rarely, more useful channels. Whence arises the present apathy for mathematical investigations? Is it not because the sublime discoveries of NEWTON kindled a spirit of enthusiasm so ardent, that improvements were multiplied and perfection approached so nearly, that in our day the laurels to be gathered are comparatively few and extremely difficult to be obtained? Botany, too, has had its day, and Chemistry has lost much of the attraction which, in our juvenile years, it was wont to possess. CAVENDISH and BLACK, PRIESTLEY and LAVOISIER, are now almost forgotten, and even the name of DAVY is heard but seldom. At one period the study of this science was almost universal; and oxygen and hydrogen, and chlorine and nitrogen, "familiar in men's mouths as household words," manifested the interest which it then excited, and which (agreeably to the general law) has since been followed by a corresponding degree of neglect. That which is true of the science as a whole is also true of its various departments; and we have only to cite mineralogy as an example in order to show, that the ardour with which a subject may be pursued is strictly in proportion to its infancy, and that all sciences will be more and more neglected as they approach nearer and nearer to perfection, for it is the nature of men to endeavour to distinguish or enrich themselves. That mine will be most worked from which the greatest quantity of ore can be extracted; and that stream will be most frequented by anglers which most abounds with fish. This disposition, or fashionable mania, is far from being confined to philosophy or the arts, for in our own profession the same disposition to simultaneous movements obviously obtains, and particular diseases have particular æras in which they are cultivated with more than usual ardour, just as *epidemic* book-making among the profession always marches in the rear of pestilential visitations. But the extent of an evil is not to be inferred from the number of individuals who may sound the alarm; or, in other words, because a host of professional writers may start up at once, like the soldiers of CADMUS, it must not be inferred that the particular disease upon which they may choose to exercise their talents is therefore making dreadful, or more than ordinary, havoc amongst us, any more than that the downfall of our ecclesiastical establishments may be predicated from the senseless cry of "the church is in danger." Not long since nothing but consumptive maladies occupied the attention of the profession, and cart loads of books were written on the subject. Now, however, although the evil remains unmitigated and unarrested, that "song has ceased," and *spinal distortions* are become the reigning topic of the day.[1]

BATTLE OF THE CLUBS.

MEDICAL MEN AND FRIENDLY SOCIETIES: THE MEDICAL ACTS AMENDMENT BILL.

AT the Oddfellows annual moveable committee, held in Cheltenham last week, Bro. F. G. Green (South London) called attention to the introduction of the Medical Acts

[1] Extract from Review of books on Spinal Distortions by John Shaw, Surgeon and Lecturer on Anatomy; and R. W. Bampfield, Surgeon to the Royal Metropolitan Infirmary for Diseases of Children. London. 1824. Longmans and Co.

Amendment Bill which was down for second reading in the House of Commons and underlying which, it was contended, there was an attempt on the part of the General Medical Council to place a very severe embargo on those medical practitioners who undertook contract work for medical associations connected with friendly societies. He said that it appeared to be the intention of the Council to endeavour to get placed on the Statute-book a measure giving it the power to withhold the diplomas and to remove the names of medical men from the Medical Register who undertook work at contract prices for medical clubs. In his (Bro. Green's) locality they had had great difficulty with regard to medical men in this connexion and there it was that the "doctors' strike," as it was called, originated. That district had been the forerunner in regard to the promotion of the Bill to which exception was taken. The first clause in the "Bill to Amend the Medical Acts, 1858 to 1886," which was backed by Sir John Batty Tuke, Sir John Gorst, Mr. James Campbell, Sir Richard Jebb, Mr. Talbot, and Sir Michael Foster, read: "Where a person registered under the Medical Acts has been convicted in England or Ireland of any felony or misdemeanour, or in Scotland of any crime or offence, or has, after due inquiry, been judged by the General Council to have been guilty of infamous conduct in a professional respect, the General Council may, if it thinks fit, by order demand that the name of the person shall be, and remain, erased from the Medical Register," &c. Bro. Green said that the view was held in friendly society circles that the expression "infamous conduct in a professional respect" might, if the Bill became law, be applied by the Council to medical men in connexion with medical associations. He therefore moved:—

That the Parliamentary agent be instructed to take the necessary steps with a view to opposing the Medical Acts Amendment Bill in the House of Commons.

Bro. A. Pinhorn (South London) seconded the motion. In the course of the discussion which ensued the view was held that brethren might do much good in their respective districts in the direction of guiding public opinion in opposition to the object which it was considered that the promoters of the Bill had in view. The motion was unanimously agreed to.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 7733 births and 4145 deaths were registered during the week ending June 6th. The annual rate of mortality in these towns, which had been 15·4, 15·5, and 14·9 per 1000 in the three preceding weeks, further declined last week to 14·3 per 1000. In London the death-rate was 13·8 per 1000, while in the 75 other large towns it averaged 14·6 per 1000. The lowest death-rates in these towns were 6·4 in Walthamstow, 6·9 in Reading, 7·1 in Burton-on-Trent, 8·0 in Hornsey, 8·2 in Willesden, 8·6 in Bristol, and 9·0 in Southampton; the highest rates were 19·9 in Liverpool, 20·6 in Bury, 21·0 in Wigan, 21·3 in South Shields, 22·0 in Warrington, 22·6 in Handsworth, 22·8 in Preston, 23·4 in Rochdale, and 29·1 in Middlesbrough. The 4145 deaths in these towns last week included 397 which were referred to the principal infectious diseases, against 428, 461, and 434 in the three preceding weeks; of these 4145 deaths 136 resulted from measles, 99 from whooping-cough, 66 from diarrhœa, 40 from scarlet fever, 38 from diphtheria, 12 from "fever" (principally enteric), and six from small-pox. In Hornsey, Southampton, Derby, Stockport, St. Helen's, Rochdale, Huddersfield, Halifax, York, and ten other smaller towns no death from any of these infectious diseases was registered last week; while they caused the highest death-rates in West Ham, East Ham, Great Yarmouth, Wolverhampton, Nottingham, Wigan, and Middlesbrough. The greatest proportional mortality from measles occurred in East Ham, Wolverhampton, Coventry, Nottingham, Wigan, Bolton, Sheffield, and Middlesbrough, and from whooping-cough in Croydon, Preston, Merthyr Tydfil, and Swansea. The mortality from each of the other principal infectious diseases showed no marked excess in any of the large towns. Two deaths from small-pox occurred in Manchester and one each in Liverpool, Bradford, Gateshead, and Cardiff, but not one in any other of the 76 large towns. The Metropolitan Asylums hospitals contained 72 small-pox patients at the end of last week, against 60, 64, and 60 at the end of the three preceding weeks; 24 new cases were admitted during the week, against seven, 19, and 10 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital which had risen from 1662 to 1771 at the end of the eight preceding weeks, had further increased to 1785 on June 6th; 210 new cases were admitted during the week, against 236, 234, and 225 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 225, 182, and 186 in the three preceding weeks, declined again to 171 last week and were 90 below the number in the corresponding period of last year. The causes of 56, or 1·4 per cent., of the deaths in the 76 large towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Leicester, Nottingham, Salford, and in 52 other smaller towns; the largest proportions of uncertified deaths were registered in Liverpool, St. Helen's, Warrington, Blackburn, Preston, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 18·0, 17·2, and 18·4 per 1000 in the three preceding weeks, declined again to 18·2 per 1000 during the week ending June 6th, but was 3·9 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 10·8 in Perth and 15·1 in Paisley to 18·8 in Greenock and 19·1 in Glasgow and in Edinburgh. The 596 deaths in these towns included 25 which were referred to whooping-cough, 18 to diarrhœa, nine to measles, seven to scarlet fever, four to diphtheria, and two to "fever," but not one to small-pox. In all, 65 deaths resulted from these principal infectious diseases last week, against 68, 51, and 70 in the three preceding weeks. These 65 deaths were equal to an annual rate of 2·0 per 1000, which was 0·6 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 25, 22, and 28 in the three preceding weeks, declined again last week to 25, of which 16 were occurred in Glasgow, five in Edinburgh, and three in Greenock. The deaths from diarrhœa, which had been 12, 16, and 18 in the three preceding weeks, were again 18 last week, and included six in Glasgow, six in Edinburgh, and five in Aberdeen. The fatal cases of measles, which had been six in each of the two preceding weeks, increased last week to nine, of which four were registered in Glasgow and four in Edinburgh. The deaths from scarlet fever, which had been one and six in the two preceding weeks, further rose to seven last week and included five in Glasgow. The fatal cases of diphtheria, which had been six, three, and five in the three preceding weeks, declined again last week to four, of which two were recorded in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 101, 102, and 114 in the three preceding weeks, declined again to 111 last week, and were slightly below the number in the corresponding period of last year. The causes of 23, or nearly 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 22·3, 22·4, and 22·2 per 1000 in the three preceding weeks, rose again to 22·7 per 1000 during the week ending June 6th. During the past four weeks the death-rate has averaged 22·4 per 1000, the rates during the same period being 14·2 in London and 18·1 in Edinburgh. The 165 deaths of persons belonging to Dublin registered during the week under notice were four in excess of the number in the preceding week and included ten which were referred to the principal infectious diseases, against 15, 11, and seven in the three preceding weeks; of these three resulted from small-pox, three from "fever," two from measles, one from whooping-cough, and one from diarrhœa, but not one from scarlet fever or from diphtheria. These 10 deaths were equal to an annual rate of 1·4 per 1000, the death-rates last week from the same diseases being 1·5 in London and 2·5 in Edinburgh. The deaths from small-pox, which had been four, four, four, and none in the four preceding weeks, rose again last week to three.

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING MAY, 1903.

(Specially compiled for THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1903.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of Infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,613,812	53	1064	580	2	85	6	22	325	—	2137	6·0	1	244	33	48	136	—	15	—	73	550	1·6	5010	14·2	98
West Districts.																										
Paddington	146,032	2	30	18	—	2	—	—	6	—	58	5·2	—	5	1	2	6	—	1	—	2	17	1·5	149	13·3	98
Kensington	178,409	—	21	13	—	4	—	1	12	—	51	3·7	—	—	—	1	4	—	—	—	3	8	0·6	144	10·5	87
Hammersmith	115,803	2	32	11	—	1	—	—	15	—	61	6·9	—	2	1	—	2	—	—	—	5	10	1·1	124	14·0	150
Fulham	147,780	—	45	32	—	1	—	1	14	—	93	8·2	—	—	1	2	6	—	—	—	3	12	1·1	128	11·3	79
Chelsea	74,169	—	40	2	—	2	—	1	9	—	54	9·5	—	—	—	—	5	—	1	—	1	7	1·2	75	13·2	117
City of Westminster	179,052	—	28	18	—	3	1	2	8	—	60	4·4	—	3	—	2	—	—	2	—	2	9	0·7	185	13·5	110
North Districts.																										
St. Marylebone	131,234	—	50	22	—	2	—	1	12	—	87	8·6	—	2	3	5	3	—	1	—	2	16	1·6	156	15·5	68
Hampstead	85,197	—	8	6	—	1	—	—	1	—	16	2·4	—	1	1	—	2	—	—	—	—	4	0·6	64	9·8	49
St. Pancras	235,716	—	42	52	—	5	—	—	25	—	124	6·9	—	42	2	4	6	—	1	—	3	58	3·2	293	16·2	116
Islington	339,137	—	61	39	—	7	—	3	11	—	121	4·7	—	16	1	1	14	—	1	—	4	37	1·4	366	14·1	92
Stoke Newington	52,069	—	6	2	—	1	—	—	1	—	10	2·5	—	2	—	—	—	—	1	—	—	3	0·8	45	11·3	92
Hackney	224,062	3	61	32	—	3	—	1	25	—	125	7·3	—	18	2	1	6	—	1	—	2	30	1·7	245	14·3	108
Central Districts.																										
Holborn	57,845	—	14	6	—	2	—	—	6	—	28	6·3	—	2	2	3	1	—	—	—	2	10	2·3	73	16·5	111
Finsbury	99,717	—	15	11	—	1	—	1	8	—	36	4·7	—	11	2	1	5	—	—	—	2	21	2·7	146	19·1	83
City of London	24,539	—	11	1	—	—	—	—	—	—	12	6·4	—	—	—	—	2	—	—	—	—	2	1·1	27	14·3	300
East Districts.																										
Shoreditch	117,513	—	20	16	—	1	—	1	7	—	45	5·0	—	16	1	4	4	—	—	—	2	27	3·0	150	16·6	82
Bethnal Green	130,028	2	19	20	1	3	—	1	12	—	58	5·8	—	11	1	1	2	—	—	—	2	17	1·7	157	15·7	76
Stepney	302,153	1	48	30	—	7	—	—	30	—	116	5·0	—	11	2	3	3	—	—	—	8	27	1·2	332	14·3	79
Poplar	169,560	10	39	27	—	1	—	1	9	—	87	6·7	—	18	—	5	8	—	—	—	6	37	2·8	229	17·6	105
South Districts.																										
Southwark	207,369	3	52	30	—	4	—	2	12	—	103	6·5	—	13	1	1	9	—	—	—	5	29	1·8	299	18·8	149
Bermondsey	129,801	1	43	18	—	4	1	—	10	—	77	7·7	—	1	4	4	5	—	—	—	3	17	1·7	161	16·2	102
Lambeth	307,711	3	65	20	—	10	—	3	13	—	114	4·8	1	15	4	1	10	—	3	—	6	40	1·7	341	14·4	122
Battersea	173,422	17	33	17	—	1	—	—	7	—	75	5·6	—	31	—	2	6	—	—	—	1	40	3·0	221	16·6	143
Wandsworth	249,678	3	86	27	—	5	2	—	31	—	154	8·0	—	5	—	—	10	—	1	—	2	18	0·9	216	11·3	74
Camberwell	265,562	1	50	15	—	3	1	1	10	—	81	4·0	—	2	—	1	9	—	1	—	2	15	0·7	243	11·9	90
Deptford	112,537	—	43	34	1	2	1	—	6	—	87	10·1	—	2	1	1	2	—	—	—	2	8	0·9	104	12·0	89
Greenwich	99,824	2	13	15	—	1	—	1	4	—	36	4·7	—	3	1	2	3	—	—	—	—	9	1·2	94	12·3	112
Lewisham	136,405	—	45	26	—	2	—	1	12	—	86	8·2	—	4	—	1	—	—	1	—	2	8	0·8	112	10·7	66
Woolwich	121,478	3	44	20	—	3	—	—	9	—	79	8·5	—	8	2	—	3	—	—	—	1	14	1·5	130	13·9	81
Port of London	—	—	—	—	—	3	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup.

The fatal cases of "fever," which had been one, two, and one in the three preceding weeks, increased to three last week. The deaths from measles, which had been five, one, and none in the three preceding weeks, rose again last week to two. The mortality from both whooping-cough and diarrhœa showed a decline from that recorded in the preceding week. Seven inquest cases and four deaths from violence were registered, and 69, or more than two-fifths of the deaths occurred in public institutions. The causes of ten, or more than 6 per cent., of the deaths registered in Dublin last week were not certified. The 165 deaths in Dublin last week included 27 of children under one year of age and 47 of persons aged upwards of 60 years; the deaths of infants showed a slight decline, while those of elderly persons were considerably in excess of the number in the preceding week.

VITAL STATISTICS OF LONDON DURING MAY, 1903.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 6·0 per 1000 of the population, estimated at 4,613,812 persons in the middle of the year. In the three preceding months the rates had been 6·2, 5·9, and 5·4 per 1000 respectively. The rates were considerably below the average in Kensington, the City of Westminster, Hampstead, Stoke Newington, and Camberwell; while they showed the largest excess in Fulham, Chelsea, St. Marylebone, Deptford, Lewisham, and Woolwich. The prevalence of small-pox showed a slight increase over that recorded in the preceding month; of the 53 cases notified during May, 17 belonged to Battersea, ten to Poplar, and three each to Hackney, Southwark, Lambeth, Wandsworth, and Woolwich. The Metropolitan Asylums hospitals contained 60 small-pox patients at the end of last month, against five, 13, and 47 at the end of the three preceding months; the weekly admissions averaged 13 last month, against three, three, and 12 in the three preceding months. The prevalence of scarlet fever was slightly in excess of that recorded in any previous month of this year; among the various metropolitan boroughs this disease was proportionally most prevalent in Chelsea, St. Marylebone, City of London, Wandsworth, Deptford, Lewisham, and Woolwich. The number of scarlet fever patients in the Metropolitan Asylums hospitals, which had been 1820, 1704, and 1685 at the end of the three preceding months, had risen again to 1738 at the end of May; the weekly admissions averaged 226, against 205, 208, and 201 in the three preceding months. Diphtheria was slightly more prevalent during the month under notice than in the preceding month; the greatest proportional prevalence of this disease occurred in Fulham, St. Marylebone, St. Pancras, Poplar, Deptford, Lewisham, and Woolwich. There were 808 cases of diphtheria under treatment in the Metropolitan Asylums hospitals at the end of last month, against 1030, 903, and 760 at the end of the three preceding months; the weekly admissions averaged 120, against 152, 126, and 105 in the three preceding months. The prevalence of enteric fever showed a marked increase last month as compared with the preceding month; among the various metropolitan boroughs this disease was proportionally most prevalent in Kensington, Chelsea, Holborn, Lambeth, and Bermondsey. The number of enteric fever patients under treatment in the Metropolitan Asylums hospitals, which had been 125, 92, and 53 at the end of the three preceding months, had further declined to 51 at the end of last month; the weekly admissions averaged 10 last month, against 13, 15, and five in the three preceding months. Erysipelas was proportionally most prevalent in Hammersmith, Chelsea, St. Pancras, Hackney, Holborn, and Camberwell. The 22 cases of puerperal fever notified during the month included three in Islington, three in Lambeth, two in the City of Westminster, and two in Southwark.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various metropolitan boroughs, the deaths occurring in public institutions having been distributed among the boroughs in which the deceased persons had previously resided. During the four weeks ending May 30th the deaths of 5010 persons belonging to London were registered, equal to an annual rate of 14·2 per 1000, against 16·5, 15·9, and 15·8 per 1000 respectively in the three preceding months. The lowest death-rates last month in the several metropolitan boroughs were 9·8 in Hampstead, 10·5 in Kensington, 10·7 in Lewisham, and 11·3 in Fulham, in Stoke Newington, and in Wandsworth; while the highest rates were 16·5 in Holborn, 16·6 in Shoreditch and in Battersea, 17·6 in Poplar, 18·8 in Southwark, and 19·1 in Finsbury. The 5010 deaths from all causes included 550 which were referred to the principal infectious diseases; of these, one resulted from small-pox, 244 from measles, 33 from scarlet fever, 48 from diphtheria, 136 from whooping-cough, 15 from enteric fever, and 73 from diarrhœa. The lowest death-rates from these infectious diseases last month were recorded in Kensington, City of Westminster, Hampstead, Stoke Newington, Camberwell, and Lewisham; and the highest rates in St. Pancras, Holborn, Finsbury, Shoreditch, Poplar, and Battersea. The 244 deaths from measles were 23 below the corrected average number; among the various metropolitan boroughs this disease was proportionally most fatal in St. Pancras, Hackney, Finsbury, Shoreditch, Bethnal Green, Poplar, and Battersea. The 33 fatal cases of scarlet fever showed a decline of 21 from the average number in the corresponding periods of the ten preceding years; the greatest proportional mortality from this disease occurred in St. Marylebone, Holborn, Finsbury, Bermondsey, and Woolwich. The 48 deaths from diphtheria were only one-third of the corrected average number; this disease was proportionally most fatal in St. Marylebone, St. Pancras, Holborn, Shoreditch, Poplar, and Bermondsey. The 136 fatal cases of whooping-cough showed a decline of 68 from the average number in the corresponding periods of the ten preceding years; among the various metropolitan boroughs the greatest proportional mortality from this disease was recorded in Paddington, Fulham, Chelsea, Islington, Finsbury, Poplar, and Southwark. The 15 deaths from enteric fever were 14 below the corrected average number; this disease showed the highest proportional fatality in Chelsea, City of Westminster, Stoke Newington, and Lambeth. The 73 fatal cases of diarrhœa were 14 in excess of the corrected average number; among the various metropolitan boroughs this disease was proportionally most fatal in Hammersmith, Holborn, Stepney, Poplar, and Bermondsey. In conclusion, it may be stated that the aggregate mortality in London last month from these principal infectious diseases was nearly 19 per cent. below the average.

Infant mortality in London during May, measured by the proportion of deaths among children under one year of age to registered births, was equal to 98 per 1000. The lowest rates of infant mortality were recorded in Fulham, St. Marylebone, Hampstead, Bethnal Green, Stepney, Wandsworth, and Lewisham, and the highest rates in Hammersmith, Chelsea, the City of London, Southwark, Lambeth, and Battersea.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following Staff Surgeons have been promoted for conspicuous professional merit to the rank of Fleet Surgeon in His Majesty's Fleet:—Edward Bridges Townsend and Patrick Brodie Handyside. Dated May 30th, 1903.

The following appointments are notified:—Surgeons: W. E. Ruttledge to the *Robin*, C. A. G. Phipps to the *Edgar*, R. W. B. Hall to the *Bramble*, and W. W. Keir to the *Britomart*.

ROYAL ARMY MEDICAL CORPS.

Major F. S. Heuston, C.M.G., is seconded whilst holding the position of Physician and Surgeon to the Royal Hospital, Kilmainham. Dated Oct. 1st, 1902. Lieutenant-Colonel A. W. P. Inman, from the seconded list, to be Lieutenant-Colonel. Dated Oct. 1st, 1902. Lieutenant-Colonel J. A. Gormley is placed on retired pay. Dated June 3rd, 1903.

IMPERIAL YEOMANRY.

Staffordshire (Queen's Own Royal Regiment): Surgeon-Captain E. W. Welchman to be Surgeon-Major. Dated June 6th, 1903.

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers): 4th West Riding of Yorkshire: Surgeon-Lieutenant A. W. Cuff to be Surgeon-Captain. Dated May 9th, 1903.

Rifle: 1st Volunteer Battalion the Royal Warwickshire Regiment: Surgeon-Captain R. A. Newton to be Surgeon-Major. Dated June 6th, 1903. 4th Volunteer Battalion the South Wales Borderers: William Percival Miles to be Surgeon-Lieutenant. Dated June 6th, 1903. 3rd Volunteer Battalion the Gloucestershire Regiment: Surgeon-Lieutenant T. M. Carter resigns his commission and is appointed Lieutenant. Dated June 6th, 1903. 3rd Volunteer Battalion the Duke of Wellington's (West Riding Regiment): Surgeon-Lieutenant A. Waugh resigns his commission. Dated June 6th, 1903. 1st Volunteer Battalion the Sherwood Foresters (Nottinghamshire and Derbyshire Regiment): Surgeon-Lieutenant E. V. Eames to be Surgeon-Captain. Dated June 6th, 1903. 1st Volunteer Battalion the Loyal North Lancashire Regiment: Surgeon-Lieutenant J. Lea resigns his commission. Dated June 6th, 1903.

MENTIONED IN DESPATCHES: THE DARWESH KHEL WAZIRIS OPERATIONS.

In a despatch from Major-General Sir C. C. Egerton, K.C.B., D.S.O., published in the *London Gazette* of June 5th and dated May 28th, the name of Colonel J. T. B. Bookey, C.B., I.M.S., is mentioned, "to whose power of organisation is due the success of the medical arrangements for the force."

THE ANNUAL DINNER OF THE ROYAL ARMY MEDICAL CORPS MILITIA.

This dinner was held on June 8th in the Alexandra Hall of the Trocadéro Restaurant, Piccadilly-circus, London, W. The chair was taken by Sir Frederick Treves, Bart., K.C.V.O., C.B., and among the guests entertained by Colonel Sir J. R. A. Clark, Bart., C.B., and the officers of the Royal Army Medical Corps Militia were Major-General Sir W. Gatacre, Sir John Furley, Sir William Taylor, K.C.B. (the Director-General of the Army Medical Service), Major-General Sir A. Turner, K.C.B., Lieutenant-Colonel W. Babtie, V.C., C.M.G., R.A.M.C., and Surgeon-General A. H. Keogh, C.B., R.A.M.C. The toast of "The Services" was proposed by Sir J. R. A. Clark, who said they were all confident that the services would work together with that unanimity and single-heartedness of purpose for the welfare of the empire which could alone secure success. Major-General Sir W. Gatacre, in reply, said that the combatant forces could not take their part in the work allotted to them without the help of the medical services. They had a valuable body in the Royal Army Medical Corps Militia and they all hoped that that branch would increase and multiply and always attract the best men to its ranks. Major-General Sir A. Turner, who also replied to the toast, said that in regard to the auxiliary forces the nation must depend on voluntary efforts and the late war had shown that they could depend on the auxiliary forces with confidence. He looked on the Army Medical Department as equal in importance to any department, for it contended in the field with disease which claimed far more victims than the sword or bullet and last, but not least, it alleviated suffering and secured the means of health. Sir William Taylor also acknowledged the toast and congratulated the Royal Army Medical Corps Militia on the promotion of Sir J. R. A. Clark to his full rank as colonel. Major Moyle O'Connor, R.A.M.C. (Militia) then proposed "The Guests" and said that it would encourage men to join the Royal Army Medical Corps Militia when the fact was known that it had been stated by Sir William Taylor and by Mr. Brodrick that they were to have a preferential claim when officers of the Royal Army Medical Corps were not available for any particular service. That would be a good point to put before candidates for the Royal Army Medical Corps Militia. The toast was replied to by Major-General W. S. Oliphant who complimented his hosts on the keenness and ability with which they did their duty. Sir John Furley also responded.

THE QUESTION OF THE INFECTED ARMY BLANKETS.

While no one would hold Mr. Brodrick, or the department over which he presides, as in any way directly responsible in the matter of the infected army blankets it must be admitted that he was placed in a very disagreeable and awkward position in having to explain what he did not seek to justify—namely, the blundering and reprehensible course which had been adopted by the authorities at Cape Town. Apart even from the regulations which exist on the subject and the instructions which had been expressly issued from the War Office in regard to the method of dealing with the infected bedding and stores in South Africa, we should have thought that common sense and prudence would have suggested that something more than ordinary care was required in dealing with enormous "stacks" of soiled and infected blankets. Admitting that the conditions set forth by Mr. Brodrick were of a pressing and exceptional character they really afford no justification for what was done and it is very unsatisfactory to the British public to be merely told that "the military authorities are considering the matter." In view of rendering any such occurrence as that which took place in South Africa impossible in future it seems to us that the War Office might go further than it has done. It should insist upon the thorough disinfection of all infected and soiled blankets and other articles as an invariable practice (where they are not ordered to be burned) and should expressly prohibit the sale or other disposal of them until this had been done. It will be remembered that not long ago we laid before our readers the results of an exhaustive inquiry instituted by the United States Government into the causes of "the typhoid fever epidemics in the volunteer camps of the United States Army in 1898." Not only was there direct infection from man to man, but the indirect infection from contaminated clothing, bedding, and tentage was very forcibly dwelt upon and worked out in connexion with what the American commission called "company epidemics."

THE DINNER OF THE SOUTH AFRICAN CIVIL SURGEONS.

Sir William Thomson, C.B., presided over this dinner which was held on June 5th at the Hotel Cecil. Mr. Clinton T. Dent, in proposing the toast of "The Imperial Forces," observed that "Tommy Atkins" in the South African war had by his cheery good humour and dogged endurance made himself everyone's friend. Referring to the soldier's remarkable propensity for recovery from the severest operations of every kind he said that this quality endeared him to the gentlemen who had to submit him to such inconvenience. The Imperial forces included men of every creed and colour knit into close union in the time of war but apt to become a little loosely divided in time of peace. To render the union more permanent was a matter for the practical politician. It had to be recognised that in time of national trouble it would be absolutely necessary to call on civil help to aid the military forces and it seemed to him that it was a pity that no attempt was made to organise in time of peace the civil medical community so that help could be afforded in time of need. Surgeon-General A. H. Keogh, C.B., R.A.M.C., replied to the toast and said that he was glad that the civil portion of the medical community had recognised its duty to the army in time of war because in future campaigns of any magnitude the civil medical element would undoubtedly have to be relied upon. The civil medical profession should therefore be organised in time of peace in order that it should be able to render efficient aid when necessary. The company separated after the chairman's health had been proposed by Mr. G. H. Makins, C.B., and suitably acknowledged.

The residential part of the Royal Army Medical College has been removed from the Hotel Belgravia to St. Ermin's Hotel, Westminster.

Correspondence.

"Audi alteram partem."

ASEPTIC AND ANTISEPTIC SURGERY.

To the Editors of THE LANCET.

SIRS,—Surely Mr. W. Watson Cheyne's remarks in his paper read before the Harveian Society were not meant to lead to a criticism of the general practitioner. He referred to the surgeons who practise aseptic as distinguished from antiseptic surgery. I must most strongly protest against Mr. F. Deane's endeavour to belittle the "general practitioner" and to dictate to him what he should do.[1] Surely a general

[1] THE LANCET, May 30th, 1903, p. 1543.

practitioner, more especially the younger members, after being schooled in the practice of antiseptic surgery, can often be as sure of obtaining primary union as the consultant and that without stitch abscesses. I myself do all my own operations and carrying out the precautions and directions given in Lockwood's "Aseptic Surgery" have obtained primary union in all cases—e.g., removal of adenoma from the breast, radical cure of hydrocele and hernia, removal of tuberculous glands in the neck, removal of dermoids over the eye, &c. What more could any surgeon obtain? This belittling of the general practitioner leads to such a state of affairs as the following. A general practitioner is called to see a patient who has fractured the greater tuberosity of the humerus. The general practitioner informs his patient that his arm is broken and the patient at once says that he must have the best man down from London. A consultant comes down, the patient has an anæsthetic, his arm is examined, and the diagnosis is confirmed. Of course, the result is that much more effusion is thrown out which has to be got rid of by massage, &c., and the consultant pockets a fee of 10, 20, or more guineas, practically for doing what was absolutely unnecessary and yet never sees the patient again. All the hard work and important massage, &c., have to be done by the general practitioner with the result of a good useful arm.

Surely, if a general practitioner is enthusiastic over surgery and will take endless pains to get all his instruments, dressings, sutures, &c., absolutely sterile and can be absolutely sure of primary union, why should he not attempt it? There are so many people who cannot afford a consultant's fee for operation and yet do not care to go into a hospital. Why should not the general practitioner take a smaller fee and give the patient as much satisfaction as if the operation were done in a hospital? The whole crux of the question, aseptic *v.* antiseptic surgery, is this, You cannot possibly do without using antiseptics and the best results, whether in hospital or private practice, are obtained by combination of both heat and chemicals as mentioned by both Mr. Watson Cheyne and Mr. C. B. Lockwood.

I am, Sirs, yours faithfully,

London, June 3rd, 1903. ROBERT HENDERSON.

SPITTING IN PUBLIC-HOUSES.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of May 16th, p. 1401, Dr. Sidney Davies refers to public-houses as being fruitful sources of phthisis. Allow me to emphasise his remarks by drawing attention to another aspect of the same subject. There is a widely spread custom, especially in old inns, of using spittoons containing sand, sawdust, malt-dust, &c., which are dealt with in ways more or less insanitary. A few days ago while cycling I experienced an object lesson not easily forgotten. Outside a charming old inn was arranged a row of wooden spittoons. These, with their filthy contents, were placed on benches in the sun to dry and after a superficial sprinkling of sawdust were replaced in the bar, &c. Such a condition is doubtless the result of ignorance and very simple measures need be taken to correct such misuse of the spittoon method of dealing with expectoration.

I am, Sirs, yours faithfully,

Devonshire-street, W., June 4th, 1903. WYATT WINGRAVE.

THE DIRTY FOUNTAINS IN TRAFALGAR-SQUARE.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me to say a few words on this from the point of view of the design of such spaces in cities? For years I have seen these huge and ugly basins with regret and put down to our British toleration of ugliness that the most used of any open space in London should be so degraded. Apart from the filth of the water the square is wholly wrong from the point of view of good and simple design. If we are to have such breathing spaces in crowded cities surely it is only plain reason to ask that they be not merely to add to the areas of asphalte and stony surfaces with which we are already amply supplied? The mistaken idea of these huge fountain basins is taken from cities like Rome with a long and hot summer. Fresh and delicious water coming from the hills and tumbling into the hot places of Rome, supplying the people with water and cooling the hot streets, was a necessity, and Roman artists made their fountains worthy of their great use and of the city of Rome. But in our cool and moist country there is no need, artistic or other, for the introduction of huge water-basins of this character and we may see the hideous result in other places as well as Trafalgar-square—for example, the head of the Serpentine.

On the other hand, we have evidence, both in London and other cities, that such small places may be fresh and beautiful, even in the smoke. There is surely enough work for our architects to rebuild our houses and cities without despoiling open spaces which with a little thought and care might add to the beauty of the town. Even their own true work suffers as such "architectural gardening," as it is called, offers no relief to buildings as even poorly planted squares do. The spaces about Trafalgar-square are so wide and airy that there is not the slightest occasion to leave a wide spread of asphalte towards the middle. There might be two lines of trees on the upper terrace and the tramps who now defile the whole place should be kept to that or some other fixed place and not occupy, as they do, the best place in the square. The warm side would be a happy place to grow the flowers that in our climate enjoy and need the sun. Even without any great change of plan the great basins would form noble flower-beds, but the best and most dignified way would be to make a clearance of the whole central block of asphalte, &c., and plant trees and shrubs. Let anyone who looks at this square in its present state go and look at some of the smaller squares in the West Central district and then compare the effect. The gardening in the squares of London is the worst of any city in Europe—men digging and muddling about overgrown privet and like rubbish—yet the trees save the situation as they would Trafalgar-square. The effect need not be in any doubt, because we have plenty of evidence already that trees that thrive in London may adorn such places.—I am, Sirs, yours faithfully,

Lincoln's Inn-fields, June 8th, 1903. W. ROBINSON.

THE USE OF THE SINGLE CUP AT THE CELEBRATION OF HOLY COMMUNION.

To the Editors of THE LANCET.

SIRS,—In view of the interest which this subject is awakening and for purposes of information in a forthcoming local discussion on the subject I should be glad if any of your readers who have been able to trace the spread of disease to the promiscuous use of one cup at the celebration of Holy Communion would kindly place a record of their experience at the disposal of the public. I venture to think that there is a strong *primâ-facie* case against the use of one cup, but the task of the hygienic innovator would be made much easier if he could cite actual examples of contagion.

I am, Sirs, yours faithfully,

Rochdale, June 9th, 1903. J. H. BRITTAIN.

PENAL CASES AT THE GENERAL MEDICAL COUNCIL.

To the Editors of THE LANCET.

SIRS,—Reading the report of the meeting of the General Medical Council in THE LANCET of last week I notice that at least two of the cases before the Council of charges of infamous conduct were adjudged not proven against the supposed offenders and the President in delivering judgment did not even caution these gentlemen, so that one may assume that the charges completely fell to the ground. I do not know precisely who or what person or body in either case was answerable for these gentlemen appearing before the Council, but it is quite evident that some person or persons outside of the Council must have laid these charges for the Council to adjudicate upon and that each of these practitioners must have been put to considerable expense to refute them, that they must have suffered great mental worry and been caused much trouble. There will be also in the minds of a great many a stigma attached to the names of these gentlemen which it will take some time to efface.

I want to ask, therefore, in the interests of the whole profession, if either, or both of these gentlemen, having been declared innocent of the charges made against them, has any redress? Can they ascertain who was responsible for the

prosecution (or shall I say persecution?) and go for damages in the civil court for defamation of character? It is evident that if charges can be made to the Council by any irresponsible person no member of the profession is safe. I am sorry to take up your valuable space but I think that this is a matter of great importance in the light of your report of the meeting of the Council last week.

I am, Sirs, yours faithfully,

THOMAS MARSHALL, L.R.C.P. & S. Edin.,
London, June 1st, 1903. L.F.P. & S. Glasg.

*** Our correspondent raises a most important question and one upon which no off-hand opinion can be expressed. He is wrong, surely, in believing that a practitioner accused before the General Medical Council of professional offences remains in ignorance of the name of his accuser.—ED. L.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Physical Unfitness of Volunteers in India.—The Plague Epidemic.—Nursing Arrangements at the Jamsetjee Jeejeebhoy Hospital.

THE physical defects which would incapacitate so many of the volunteers at home from active service appear to be still more marked among the volunteers in India. The 800 unmounted volunteers who were at the Delhi durbar afforded to Surgeon-Lieutenant-Colonel J. S. Brooke an opportunity of showing in his report various particulars of the general physical condition of the men under his charge. In all 333 men came on sick parade—a very large proportion out of 800 considering the short time during which they were on duty and the fact that their work was almost entirely ceremonial. 14 were sent home as totally unfit for any service. Surgeon-Lieutenant-Colonel Brooke says that the extremely weedy appearance of the volunteers confirms him in the conviction that all volunteers should be medically examined before being enrolled. He has no hesitation in saying that on field service fully 35 per cent. of the men at Delhi would have been useless. In this connexion it must be remembered that the volunteers in India are largely composed of men of mixed blood—in fact, the cry has gone up that in some corps there is very little distinction between the men and the natives, and even that in many cases typical natives have been admitted. This is a serious question, because the volunteers in India are more likely to be called upon for duty than are those at home and physical unfitness in so large a proportion would cause us to live (if the volunteers here are to be of any use) in a fool's paradise. There are very few corps solely composed of men of pure British blood and these are the few crack corps in the country.

The mortality returns for Bombay city are now rapidly returning to a more normal standard. The deaths from plague have rapidly declined in number during the past few weeks, but the extraordinary feature of the Bombay returns is the fluctuating mortality from pulmonary tuberculosis and diseases of the respiratory organs. There is little doubt that plague is reported under the heading of chest complaints and that these fluctuating records are the fruit of inaccurate registration. Plague seems, as it were, to leave Bombay by the north of the island as, while declining in the city, it attacks the villages to the north very severely. The epidemic of plague throughout India has been the subject of some general influence. The outbreaks in various places have declined rapidly during the past few weeks and although Karachi is still badly affected, as are some parts of the Punjab, the disease is everywhere else subsiding. Very little inoculation work is being done for plague, still less for cholera, and that for typhoid fever is now, for the army at any rate, prohibited.

I reported to you a little while ago the unsatisfactory state of the nursing arrangements at the Jamsetjee Jeejeebhoy and adjoining hospitals in Bombay. In only one-half of the wards of the Jamsetjee Jeejeebhoy Hospital, which were nearly always full, were the patients nursed at all, the remainder being left to the tender mercies of ward boys and ayahs. Mr. and Mrs. Crowe took up the task of improving this condition of things and a large sum of money has been collected. The nursing fund will now with Government help be very little short of its requirements, but the nurses' quarters being very badly wanted Mrs. Wadin (a wealthy Parsee lady) has undertaken to build them. A serious reproach to the present generation of Bombay citizens has thus been completely removed.

May 23rd.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The General Hospital: Endowment of a Bed by a Football Club.

THE famous Aston Villa Football Club is well known to all persons taking any interest in a sport which attracts the attention of so many during a large portion of each year. It will, however, be news to most that, in addition to taking a high place in the world of athletics, this club gives considerable sums in aid of charities of various kinds, the sum actually contributed during the past 11 years amounting to about £20,000. The last exhibition of its generosity took place on June 5th, when a cheque for £1250 was handed over to the committee of the General Hospital for the permanent endowment of a bed in the accident ward of that hospital. The history of the raising of this sum is of interest. In 1899 Mr. Margoschis, who had long been one of the directors of the club, retired from that position and in order to mark its sense of the services which he had rendered it was decided to present him with a sum of £100. Mr. Margoschis, instead of accepting the gift for himself, expressed a wish that it should form the nucleus of a fund to be raised permanently to endow a bed in the hospital. The result of many efforts during the past four years has been that the sum has now been raised and a deputation from the club was present at the meeting of the committee of the hospital held last week when a cheque, as above stated, was handed to Mr. Hugh Smith, the chairman of the committee, by Mr. Margoschis himself.

Education Committee.

In a previous letter I mentioned that the education committee had advertised for a superintendent of special schools who might either be a medical woman or a person with special knowledge of this particular class of schools and I expressed the hope that a member of the medical profession might be selected for this post. At the last meeting of the committee this hope was realised by the appointment of Miss Caroline E. O'Connor, M.B., Ch.B. Edin., at a commencing salary of £150 per annum. In proposing her election, Mrs. Pinsent, who is chairman of the subcommittee charged with the care of these schools, said that a few years ago it was supposed that there were comparatively few children in Birmingham who could be regarded as mentally deficient. Inquiries, however, revealed the fact that there were many mentally defective children in the schools whose presence therein had not been generally known. It was estimated that whilst there were between 8000 and 9000 such children in London there were between 800 and 900 in Birmingham. At the end of April, 1902, only 118 were on the register of special classes in this city and it became apparent to the late school board that every effort must be made to trace out the children of this class who were in the ordinary schools. The duties of superintendent were undertaken by the members of the committee but it soon became evident that a special officer must be appointed to take charge of this work; hence the appointment which has just been made. Dr. O'Connor was for some time medical officer of Eday, one of the Orkney islands.

Health of Birmingham during 1902.

The last report—that for the year 1902—which the present medical officer of health, Dr. Alfred Hill, will issue has recently been made public. From this it appears that the death-rate during the past year is the lowest that has ever been recorded in Birmingham and that, as regards the sanitary condition of the city, considerable advance has been made in different directions. The estimated population of the city was 528,521 and the number of inhabited houses was about 110,500. The births recorded during the year were equal to a birth-rate of 31·9 per 1000 of the population. This is a very low figure, in fact, only once—viz., in 1894, when the birth-rate fell to 31·6—has such a small ratio been recorded. The number of marriages registered was 5120, equal to a rate of 19·1 per 1000. The death-rate was 18·0, this being 2·2 per 1000

below the average of the past ten years. If the rate had been the same as the average of the past ten years—20·2 per 1000—there would have been 10,844 deaths, whereas the actual number was 9672, a saving of 1172 lives. Dr. Hill calls attention to the great mortality amongst infants which he states is more than ten times as great as that of the population as a whole. Last year, however, the infantile mortality of Birmingham was unusually low, being at the rate of 157 infant deaths per 1000 births, against an average of 189 in the previous ten years. The deaths from the seven principal zymotic diseases numbered 1397, equivalent to a death-rate of 2·6 per 1000. The deaths were thus divided: diarrhœa, 412; scarlet fever, 293; whooping-cough, 269; measles, 189; diphtheria, 130; enteric fever, 100; and small-pox, 4. There were notified during the year 5044 cases of scarlet fever, 787 of diphtheria, 544 of enteric fever, 69 of small-pox, and 1548 of chicken-pox. Dr. Hill calls special attention to the value of vaccination and revaccination and insists that it is only since vaccination became more general that small-pox has taken the mild and not very fatal form with which we are now acquainted. The number of cases of scarlet fever was far greater than in any other year since compulsory notification was introduced. The deaths, however, were not very numerous, amounting only to 5·8 per cent. of the cases. During the year there was an increase in the number of cases of diphtheria from 533 to 787 and there were 130 deaths as compared with 85 in the former year. Dr. Hill thinks that the increase in this particular kind of disease is in some way connected with the great prevalence of scarlet fever. From consumption there were 874 deaths and from other forms of tuberculosis there were 219, giving, for cases of consumption, a death-rate of 1·63 per 1000. The death-rates, as on previous occasions, show that consumption is principally a disease of the less sanitary portions of the city, where both the hygienic and social conditions are of an inferior character. The number of houses declared to be unfit for human habitation by the medical officer during the year was 450 and all these are being dealt with by the health committee. The report also contains a statement of the number of cases in which sanitary improvements were insisted upon and carried out during the year.

June 9th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The New University of Liverpool.

THE clerk of the Privy Council has issued the draft charter incorporating the University of Liverpool. One of the conditions of the constitution of the University is that there shall be no religious tests imposed on either teachers or students and that no theological teaching shall be given by, or under the authority of, the University. Colleges and institutions in which theological teaching is given may, however, be recognised by affiliation. Women are to be eligible for any office in the University and for membership of any of its constituent bodies, and all degrees and courses of study in the University are to be open to women, subject to such conditions and regulations as the statutes of the University may prescribe. The court will include, in addition to members of the University, five persons appointed by the city council, one by the House of Keys of the Isle of Man, two by the county council of Lancashire, one each by the counties of Cheshire, Cumberland, Shropshire, and Westmorland, one each by the boroughs of Barrow-in-Furness, Birkenhead, Bootle, Chester, Crewe, Lancaster, Leigh, Preston, St. Helen's, Southport, Warrington Widnes, and Wigan, and one by the district councils of Runcorn and Wallasey, the Members of Parliament for Liverpool and Birkenhead, and not less than ten Members of Parliament for the boroughs and divisions of counties or boroughs in the counties of Lancaster and Cheshire to be nominated by the court, the Governor of the Isle of Man, the Lords Lieutenant of the counties of Lancaster and Cheshire, the Lord Mayor of Liverpool, the chairmen of the Lancashire and Cheshire county councils, the Vice-Chancellor of the Duchy of Lancaster, the Bishops of Liverpool, Chester, and Sodor and Man, the Roman Catholic Bishops of Liverpool and Shrewsbury, and representatives of the Presbyterian Church of England, of the Congregational Union, of the Wesleyan Methodist Church, of the Baptist Church, of the Presbyterian and Unitarian ministers, and various officials of public bodies in Liverpool, Lancashire, and Cheshire; also representatives of various educational institutions in these districts. The court will be the supreme governing body of the University but the executive will be a council; there will also be a senate which, subject to the control of the council, will regulate and superintend the education and discipline of the University. The senate is to consist of the vice-chancellor, the deans of all the faculties, all the professors of the University, and the librarian. Principal Dale of University College is nominated as the first vice-chancellor.

The Gradual Subsidence of Small-pox in Liverpool.

At the meeting of the health committee held on June 4th Dr. E. W. Hope, the medical officer of health, reported that 33 fresh cases of small-pox had been notified during the past week, as against 49 during the previous week. There were 198 cases in hospital, compared with 231 and 253 in the previous two weeks. The cases in hospital had decreased from 335 on March 19th to 198 on June 4th. There had been four deaths from small-pox during the week.

University College, Liverpool: New Lectureships.

The council of University College, Liverpool, has made the following appointments to lectureships in the faculty of medicine: Specific diseases, Dr. A. Bernard; experimental medicine, Dr. A. S. F. Grünbaum; and comparative pathology, Dr. H. E. Annett.

Meeting of the Anatomical Society in Liverpool.

The Anatomical Society will hold its summer meeting at University College, Liverpool, on June 19th and 20th. The programme is an interesting one and includes meetings for the exhibition of specimens and the reading of papers. Dr. A. N. Walker is the local secretary of the society. The society's dinner will take place at the Adelphi Hotel on June 19th. The Manchester Edinburgh University Club has taken advantage of the meeting of the Anatomical Society at Liverpool to invite Sir William Turner and Professor D. J. Cunningham to a complimentary dinner at the Adelphi Hotel on June 18th. All Edinburgh graduates are invited to be present and may bring guests. Tickets (10*s.* 6*d.* each, exclusive of wine) may be obtained from the local secretary, Dr. R. C. Dun, 6, Rodney-street, Liverpool.

The Health of Bootle: Mr. T. W. N. Barlow's Annual Report.

Mr. Barlow (the medical officer of health of Bootle) in his annual report for 1902 emphasises the protection afforded by vaccination and revaccination against small-pox. During the year there were 15 distinct outbreaks of small-pox—25 cases in all. Not one of the patients had been revaccinated and seven had never been vaccinated. There were four deaths and with the exception of one woman, aged 45 years, all were among the unvaccinated class. A further proof of the value of revaccination is afforded by the fact that while several of the nurses and ward-maids during the year had been attacked with scarlet fever, two with typhoid fever, one with diphtheria, and one with typhus fever, not one of the staff had contracted small-pox. All had been living under the same conditions and had been exposed to the same danger of contracting this disease as the others, but revaccination was insisted upon for every member of the hospital staff, with the result that not one had contracted the disease. Dr. Hope's experience at the Liverpool Small-pox Hospital coincides with that of Mr. Barlow, and it is inconceivable how the anti-vaccinationists can ignore such remarkable facts. The birth-rate of Bootle for 1902 is the highest recorded for six years. The death-rate was 18·9 per 1000 of the population. The zymotic death-rate was 2·7 per 1000. 46 children had died from measles; 14 had died from scarlet fever out of 321 cases notified. Infantile mortality, although still high, shows a gratifying decline, as also does the number of deaths from summer diarrhœa. The appointment of a veterinary inspector to inspect periodically the cattle in shippons has been attended by distinctly beneficial results. The health committee has agreed to Mr. Barlow's recommendation to remove the small-pox hospital to an isolated place further in the country.

June 9th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Monmouthshire Western Valley Sewer.

THERE appears to be at last some prospect of a trunk sewer being constructed for the drainage of those rapidly increasing colliery districts which now pollute the river Ebbw. A committee of the House of Commons has found proved the preamble of a Bill which provides for the construction within the next seven years of a sewer discharging into the Bristol Channel near Newport. The localities concerned are the urban districts of Ebbw Vale, Nantyglo and Blaina, Abertillery, Abercarn, and Risca which have a combined area of 31,000 acres, a population of 81,000, and a rateable value of £266,000. The population in 1891 was 69,000. The estimated cost of the sewer is £237,000. A great deal of contradictory evidence was given before the committee with regard to the relative advantages of a joint trunk sewer and of separate bacterial schemes. The advocates of the latter insisted that a main trunk was not at all suitable for a mining district where subsidences so often take place, but in opposition to this view evidence of the stability of the Rhondda sewer was tendered showing that this main trunk, which is 17½ miles long and cost £156,000 to construct, has quite fulfilled the expectations of its designers since it was completed in 1892.

Merthyr Tydfil Union Infirmary.

The board of guardians of the Merthyr Tydfil Union is very desirous of continuing the workhouse infirmary as a training school for nurses and the medical officer (Mr. J. L. W. Ward) has recently reported to the Local Government Board in some detail pointing out that the infirmary contains all the essentials of a training school, as set out in the report of the departmental committee on workhouse nursing, except that there is no resident medical officer—an omission which is practically met by the fact that he lives within a few minutes' walk of the institution and is in direct telephonic communication with every block and charge nurse. The building is well equipped as a modern hospital, with an excellent operating theatre, and there is an x-ray apparatus for diagnostic and other purposes. During last year nearly 1200 patients were under treatment in the infirmary.

Vaccination of Vagrants.

In February of the present year the Leominster board of guardians instructed the medical officer of the workhouse to vaccinate all vagrants who were willing to undergo the operation and nearly 450 persons have thus been vaccinated. In view of the near approach of the hop-picking season, when several thousand men, women, and children come into Herefordshire from Staffordshire and South Wales, it is to be regretted that the board should have decided to rescind the resolution which it adopted in February. The reason given by the chairman of the board for taking this retrograde step is that it was anticipated that tramps would be kept away from the union, whereas there has actually been no diminution in the number seeking admission to the casual wards. It is only fair to state that all the members of the board are not in agreement with the chairman and one guardian pointed out that the single case of small-pox which had occurred this year among the tramps who visited the Leominster workhouse had cost the board £40.

Chippenham Cottage Hospital.

Although the Chippenham Cottage Hospital was established as recently as 1899 with eight beds it has already been found necessary to increase the accommodation and on June 2nd Lady Dickson-Poynder formally opened a new wing which includes a ward with a nurses' duty room and bedroom and a bath-room. The cost of these additions, including the furnishing, is £750 and nearly the whole of this sum has already been raised.

An Isolation Hospital in the Gower Peninsula.

Isolation hospitals are being gradually provided throughout Glamorganshire in response to pressure brought to bear by the county council. From the Gower rural district, where there is a decreasing population of about 7000 persons, small-pox patients have hitherto been received into the Swansea Hospital and the district council has persistently refused to establish an isolation hospital within its own area. The sanitary committee of the county council has therefore decided to make a compulsory order for the erection of a hospital.

Western Counties Asylum, Starcross.

The annual meeting of the subscribers to the Western Counties Asylum for the Treatment of the Feeble-minded was held at Starcross, Devon, on May 30th. The financial statement showed that the total income, including a favourable balance of £1070 brought forward from 1901, was £9229. The total expenditure was £8701 and a favourable balance of £528 remained. The medical report stated that during 1902 the average number of patients was 270, the health of the inmates had been good, and only one death had occurred. There had been an increase in the average cost of maintenance, which was 10*s.* 2*d.* per head, against 9*s.* 7d. in 1901. In these circumstances the committee has decided to raise the charge for cases from the four western counties from 9*s.* to 10*s.* 6*d.* weekly and for those from other counties to 14*s.* weekly.

June 9th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The University of Dublin.

THE Senate of the University of Dublin decided on June 9th to admit women to its degrees.

Royal College of Surgeons in Ireland.

A meeting of the Fellows of the Royal College of Surgeons in Ireland was held on May 30th to elect a President, Vice-President, council, and secretary of the College for the ensuing year. The following were elected:—President: Mr. L. Hepenstal Ormsby. Vice-President: Mr. Arthur Chance. Secretary of the College: Sir Charles A. Cameron, C.B. Council: Sir Philip Crampton Smyly, Mr. Henry Rosborough Swanzy, Mr. Edward Hallaran Bennett, Mr. William Stoker, Sir Charles Alexander Cameron, C.B., Mr. Austin Meldon, D.L., Mr. John B. Story, Sir William Thomson, C.B., Sir Charles B. Ball, Sir Thomas Myles, Mr. John Lentaigne, Mr. Richard D. Purefoy, Mr. Henry G. Sherlock, Mr. R. Bolton M'Causland, Mr. Robert H. Woods, Mr. Thomas Donnelly, Mr. William Taylor, Mr. Edward H. Taylor, and Mr. G. Jameson Johnston. Members of the court of examiners are not eligible for seats on the Council.

Public Health of Dublin.

The reports in reference to the public health of Dublin are fairly satisfactory. Typhoid fever, measles, whooping-cough, and diphtheria still prevail, but small-pox, of which a serious epidemic was threatened, is now on the decrease and is still practically confined to the originally infected area on the north side of the city. Many successful prosecutions of people in that district for concealment of cases have resulted in fines and the number of patients notified as suffering from small-pox has decreased week after week in the city. Professor E. J. McWeeney, pathologist to the Local Government Board, has recently made public in a lecture delivered on May 25th some interesting statistics which he obtained from the Registrar-General. As regards tuberculosis—which is on the increase in Ireland while being fairly successfully dealt with elsewhere—it appears that during the year 1902 that disease, which is not notifiable, caused 1736 deaths in the Dublin registration area while all the infectious diseases grouped together were responsible for only 924. In reference to isolation hospitals the opinion was expressed that suitable sites might be obtained either in the Dublin mountains or in the large grazing districts of the north-western portion of the county, the fact being that if a patient was placed in a suitable ambulance car—preferably motor—it did not affect him much whether the distance was two miles or ten. With regard to measles he remarked that Dublin had suffered from a severe epidemic with 392 deaths last year. Whooping-cough caused 59 deaths and scarlet fever 76. The statistics in reference to diphtheria are interesting, for that disease was almost unknown in Ireland 15 years ago. There were no less than 473 notifications last year with 85 deaths. The mortality for the previous ten years averaged 42, so that a marked increase of deaths from diphtheria has certainly occurred in the Dublin registration area of late years.

The Sanitation of Dublin.

The Commissioners of National Education in Ireland have recently issued a memorandum to the managers of national schools respecting what they term "the extremely unsatisfactory condition of many of the national schoolhouses in regard to repair and cleanliness." The memorandum goes on to enumerate in detail the "disgraceful state" in which many schoolhouses are kept in respect to sanitary arrangements, and calls upon the managers, unless they are prepared to take the risk of losing State aid altogether, to exercise systematic supervision over the school premises. It is rather late for the commissioners to investigate and to take action as regards this matter, for, although the inspectors of the Board have reported many times in reference to it, it has remained a sanitary disgrace to Ireland for years. The able inspector from THE LANCET, who came over to this country some years ago in order to investigate the causes of the high death-rate in Dublin, was surprised at the state of things as regards personal sanitation which prevailed here. He remarked that the poor people in Dublin even when perfect sanitary arrangements were available did not seem to know how to use them. There can be no doubt that the fault really lies with the managers of the national schools of Ireland and it is full time that the Board should proceed to institute a reform. One of the most experienced national school inspectors mentioned to me some time ago that the condition of the sanitary arrangements in his schools—many hundreds—was such that it would be far better if such premises were non-existent. The *Irish Times*, in a leading article on the subject, says:—

> It is to be hoped that the Commissioners of National Education, now that they have taken the matter in hand, will firmly insist on a systematic and satisfactory supervision of the school premises on the part of those who are locally responsible for their maintenance. In this course they will be firmly sustained by the public opinion of the country.

The Granard Nursing Scandal.

The nursing trouble at the Granard union has been temporarily settled. At a meeting of the board of guardians on June 1st Dr. Joseph Smyth, Local Government Board inspector, appeared and recommended that no action should be taken, in the hope that by removing certain defects in the nursing arrangements of the house the causes of official friction between the nun nurses and Dr. J. M. S. Kenny might be removed. After a protracted debate that course was adopted. The guardians promised to appoint a fully qualified nurse at a salary of £35, while the nursing nuns consented to stay on as nurses for another two weeks.

The Poor-law Medical Service in Ireland.

The casual reader of an Irish newspaper at the present moment must see from the constant references to disputes between medical men and the local and central authorities that matters cannot long go on as at present. References have already been made in THE LANCET[1] to the difference between Dr. E. C. Thompson, M.P., and the Omagh guardians. He demanded 12 guineas for his four days' attendance for Dr. H. B. Fleming (they had previously summarily dispensed with Dr. Thompson's services); they offered three guineas. On June 6th Dr. Thompson's solicitor sent a letter on his behalf to the effect that three guineas is the minimum fee fixed by the Irish Medical Association for a medical man who agrees to act for so small a fee and was never intended to apply to such a case as the one under discussion, nor to a practitioner of the standing of Dr. Thompson, nor did the guardians appear to take into consideration the fact that by their action they deprived Dr. Thompson of fees for the remainder of the time during which Dr. Fleming was unable to perform the duties. In these circumstances Dr. Thompson declined the offer of the guardians but was still open to accept a reasonable sum rather than to resort to a court of law. The guardians have decided to fight the case on its merits and it is hoped that Dr. Thompson will give them the chance. At the same board Mr. James Hamilton of Dromore wrote that he could get no substitute to act for him at the fee offered by the board and that he would therefore ask for no vacation at present; while Mr. Thomas Duncan, medical officer of the Fintona dispensary, wrote in reference to some disparaging remarks made by the guardians in reference to his fee for attending at Fintona petty sessions in a vaccination prosecution that he only did so on receiving an intimation from the public health committee in Dublin. A guardian said that this letter should be treated with contempt and thrown into the wastepaper basket—that is, a medical man who obeys the central controlling body in Dublin is censured by the local authorities in his own district. At a meeting of the Coleraine rural council on June 6th a letter was read from the Local Government Board in reference to a fee of £2 2*s.* due to Dr. J. Lennox, J.P., of Kilrea, for attending the Coleraine quarter sessions on behalf of the council, to the effect that in a case like this "the council might pay the medical officer concerned not less than one guinea and not more than two guineas." Naturally, the council after this oracular statement resolved to ask Dr. Lennox if he would accept one guinea, which it is to be hoped he will decline. It is most unfair to the medical officer to put him in this position, and obliges him to fight the case, while the Local Government Board should say when appealed to whether he is entitled either to what he claims (£2 2*s.*) or to one guinea. It is this vacillating, hesitating policy which largely keeps up the present unpleasant friction between the medical officers and the guardians. Again, at a meeting of the Londonderry guardians on June 6th, the clerk stated that the Local Government Board had written sanctioning the payment of one guinea to Dr. F. A. Craig for acting as substitute for Dr. James Craig, dispensary officer, but had not replied whether the guardians could deduct that amount from the salary of Dr. James Craig, as it had been asked to do. These cases which I have cited—and they are examples of what is now constantly occurring all over Ireland—show to what a pass we have come in medical matters in Ireland. The feeling is becoming stronger, even amongst moderate men, that before long if their reasonable demands are not granted the whole of the medical dispensary officers of Ireland will resign *en masse*, relying on the rest of the profession in that country to support them in their struggle by not applying for their posts.

The Poor-law in Ireland.

A viceregal commission, consisting of Mr. W. L. Micks, one of the Commissioners on the Local Government Board for Ireland (chairman), Mr. George Murnaghan, M.P. (chairman of the Omagh board of guardians) and Dr. E. C. Bigger, medical inspector of the Local Government Board, has been appointed by Lord Dudley to inquire into, and to report on, the following subjects:—

1. Whether any Poor-law unions could be dissolved with advantage to the ratepayers and without hardship to the sick and destitute poor, and if any such dissolution be deemed desirable what arrangements by amalgamation of unions or otherwise should be substituted therefor.
2. Whether, in the event of any unions being amalgamated and the workhouses thereof being no longer required for Poor-law purposes, such workhouses could with advantage be taken over by county councils for auxiliary lunatic asylums under Section 76 of the Local Government (Ireland) Act, 1898, or could be otherwise utilised for any public purpose.
3. Whether it would be possible, either by an arrangement for the maintenance of paupers in adjoining workhouses or by combining a number of unions for the purposes of indoor relief, to make better provision for the classification and treatment of the inmates, especially the aged and infirm sick, lunatics, and children chargeable to the said unions, and whether any changes in the law and procedure as to the administration and chargeability of relief would be desirable in the event of such combination of unions being carried out.
4. Whether, having regard to the number and capacity of workhouses, hospitals, and infirmaries existing in any county, union, district, or locality, and to the other provisions for the relief of the sick poor, any additional accommodation is now required for the proper treatment of the sick poor, and, if additional accommodation is necessary, how it might best be provided.
5. Generally to inquire and report whether any and what administrative and financial changes are desirable in order to secure a more economical system for the relief of the sick, the insane, and all classes of destitute poor in Ireland, without impairing efficiency of administration.

Great surprise has been expressed in medical circles that no direct reference has been made for the consideration by this commission of the grievances of the medical officers under the Poor-law system and it is regarded as very extraordinary that those responsible for drawing up the references have paid no consideration to the present widespread feeling in Ireland on the question. The natural result will be that the combination plan will be pushed on, as neither from the central authority (the Local Government Board) nor from the guardians can the Poor-law medical officers receive any fair consideration of their just claims. The profession has only to remain true to itself and the victory will soon be won.

June 9th.

[1] THE LANCET, May 23rd (p. 1485) and 30th (p. 1560), and June 6th (p. 1621), 1903.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Radioscopy in the Examination of Candidates for Life Assurance.

THE Third International Congress of Medical Officers of Life Assurance Companies was held in Paris from May 25th to 28th and gave rise to several interesting discussions, including one upon the radioscopic examination of candidates for life assurance. M. Béclère said that the object of radioscopy in medicine was the discovery of impacted foreign bodies or the inspection of the skeleton or the obtaining of information as to the state of the viscera. The first two conditions rarely present themselves in the case of insurance proposals, but radioscopic examination of the contents of the thorax is proving itself every day to be as useful as percussion and auscultation. These two latter methods only supply information as to the state of the more superficial structures, whereas radiography shows what is going on in the deep parts and enables the dimensions of organs to be ascertained. The Roentgen rays are a marvellous means of diagnosis, capable of rendering great services to life insurance companies. In this department of medical work the rays will find their chief application in the examination of the thorax and in the detection of otherwise unrecognisable disorders of the organs of respiration and circulation. Radioscopic examination of the thorax is indicated when pulmonary tuberculosis, cardiac hypertrophy, or aortic aneurysm is suspected. Various speakers discussed the subject and the opinions expressed by M. Béclère were generally accepted.

Respiratory Insufficience in Pulmonary Tuberculosis.

At the meeting of the Academy of Medicine held on June 2nd M. Mendel gave an account of an investigation of the respiration in tuberculous patients which he had made by means of the pneumograph. He had found that when a solution consisting of 5 per cent. of eucalyptol dissolved in olive oil was introduced into the air passages the effect in favourable cases of tuberculosis was the immediate production of a thoracic expansion which was observable for several hours; in the event of this result not occurring the prognosis was serious. When tracheal injections of oil containing eucalyptol were given daily for some weeks this expansion became permanent and the patient's manner of breathing might undergo considerable modification. Simultaneously with this expansion the patient's general state improved, his appetite increased, and he gained in strength and weight. The decline of bodily vigour in tuberculous cases appeared, therefore, to be due not only to the bacterial infection from which they suffered and the degree of which was variable, but also to the impairment of their respiratory functions—an impairment which might be accounted for by the pulmonary lesions and the consequent encroachment on the respiratory area.

Compulsory Vaccination for Tunisian Immigrants.

An official note which has been the subject of lively comment among the Italian colony in Tunisia has just been put forth by the Government of that protectorate. The note decrees that henceforward immigrants upon disembarking at Tunisian ports will have to be medically examined and if it be considered necessary will have to be vaccinated. First- and second-class passengers will not be held to be immigrants. Moreover, a fee of 50 centimes will be charged for each vaccination. Entrance to the country can be refused to any immigrant who declines to submit himself or his children to medical inspection or vaccination.

Tænia Solium as a Detective.

It could hardly be imagined that tænia solium would aid in the discovery of a crime but an instance has occurred in the department of Eure. A convict in prison suffered from tænia for which he was treated by the medical officer. Some little time afterwards the convict, whose sentence had expired, was set at liberty, and within a few days a house in the neighbourhood was broken into. On the police examining the scene they found some excrement deposited in the middle of the room, in accordance with a gross jest which is common among some of the criminal classes. In the motion were several joints of a tænia and the examining magistrate set on foot inquiries among recently released prisoners. The man above referred to was promptly re-arrested and he, though much surprised, confessed to the crime at once.

June 9th.

SWITZERLAND.

(FROM OUR OWN CORRESPONDENT.)

The Care of Mentally Deficient Children.

THE Swiss Society for the Care of Mentally Deficient Children held its fourth annual meeting at Lucerne on May 11th and 12th. This society, which is doing excellent and very necessary work, finds support among all classes of society. The meetings were attended by an average of 220 ladies and gentlemen, including medical practitioners, clergymen, teachers, and representatives of various cantons of Switzerland. Most of the cantons, it may be remarked, have made joint arrangements to promote the aims of the society. Mr. Auer, the president, read a report on the progress of the work. At the beginning of the year 1901 there were in Switzerland 18 institutions accommodating 748 mentally deficient children (idiots). At the present time 868 are provided for in Switzerland and 91 have been placed in suitable establishments in Germany. Four new establishments with accommodation for 54 pupils have been opened and a new establishment for mentally deficient deaf-mutes has been opened at Turbental. According to the statistics read the number of special school classes for pupils who cannot well attend the ordinary classes in the State schools has greatly increased. In 18 Swiss towns there are now 53 such classes with 1096 pupils. Dr. Ulrich, medical superintendent of the Swiss epileptic home in Zürich, delivered an address on the Origin and Prevention of Mental Deficiency. The public, he said, were in need of instruction as to the various reasons of mental deficiency and the importance of hereditary influences. Measures ought to be adopted for the reduction of alcoholism, syphilis, tuberculosis, and cretinism, and provision must be made for the relief of the poor. Dr. Schenker of Aarau strongly advocated legal interference with regard to marriage in the case of the mentally deficient.

Swiss Society for School Hygiene.

This society, which now has 600 members, held its fourth annual meeting, which was well attended, at Schaffhausen on May 16th and 17th. Mr. Paul Lincke described a variety of practical details connected with school baths. All the newly built schools in Switzerland have now a portion of the premises appropriated for purposes of baths. Each class bathes about once a fortnight, summer and winter. The bathroom should be on the ground floor and should have from 16 to 24 baths placed at a distance of about one and a half yards from each other, so that a class of 60 children can bathe in an hour. Dr. Ost, school medical officer at Berne, spoke on the hygienic side of the question. These baths, he said, soap being used and a warm bath being followed by a cooler one, according to medical regulations, serve to take the place of hygienic methods often neglected at home. Proper excretion and secretion are thereby insured and cleanliness is encouraged. Such baths, which of course are not obligatory, should be universally introduced, only sick children and those who are suffering from skin diseases being excluded. They are also advantageous from an educational point of view, as the parents learn to take an interest in the proper hygienic treatment of the skin. Dr. Laubi of Zürich described his examinations of school children with regard to their auditory functions. He recommended that all children on entering school at the age of six years should be examined by a general practitioner or an aural surgeon, and should be re-examined in the event of them suffering from any infective disease. A second examination before leaving school, at the age of 14 years, was also desirable, as important advice might be given with regard to the choice of an occupation. Children whose hearing was very bad and who were incurable should be referred to institutions or private tuition; others should be placed temporarily in asylums for the deaf and dumb, or at school should sit in the front seats. Children with aural discharge (otitis media) should only be allowed to go to school if under proper medical care and if their ears were properly bandaged to avoid the spread of infection. Children with adenoids should be put under the supervision of the medical officer. Dr. Keller of Winterthur afterwards spoke at some length about overwork in the higher school classes in which the pupils were from 12 to 16 years of age and he pleaded for a reduction of school work in the interest of health.

Tuberculosis of the Kidney.

Dr. F. Suter of Basle has published an account of 42

cases of tuberculosis of the kidney, with special reference to the diagnosis and surgical treatment of this condition. The cases were all treated in the private clinique of Professor Burckhardt. Heiberg found by post-mortem examination that tuberculosis of one kidney occurred in 7 out of 15 cases of urogenital tuberculosis and in 17 out of 30 cases of metastatic tuberculous disease of the kidney. This is also proved by necropsies of cases which succumb after operation and clinically by the after-results of nephrectomy performed to remove one tuberculous kidney. As regards diagnosis the microscopic and chemical examination of the urine reveals nothing positive, whereas the bacteriological evidence is conclusive. In 40 out of 42 cases of tuberculous kidney no bacterial growth was obtained on culture media on which the tubercle bacillus does not develop; in the other two cases there was a growth of staphylococcus and bacterium coli which had no doubt been introduced by local instrumental interference. Appropriate culture methods revealed the existence of the tubercle bacillus in each one of the 42 cases. This is especially important, as the diagnosis may otherwise be very difficult. Such symptoms as a distinct tumour or pain on pressure being often doubtful cystoscopy is always necessary to determine which kidney is affected, the operation being contra-indicated if the other kidney is not proved to be healthy. Sometimes further investigation by experimental glycosuria, by administration of methylene blue, and by the determination of the urea derived from each ureter is necessary, or it may be desirable to determine the freezing-point of the urine excreted by each kidney (Korányi). If no operation is performed the disease will prove fatal sooner or later. Dr. Suter has published an account of 14 nephrectomies with two deaths. In the fatal cases the other kidney proved to be healthy. The 12 patients either recovered completely or their condition was greatly improved for years. Küster reports on 300 cases with a mortality of 28 per cent. Israel in Berlin has had 28·5 per cent. mortality.

Zürich, June 3rd.

NEW YORK.

(FROM OUR OWN CORRESPONDENTS.)

Adoption of a New Code of Medical Ethics in the United States.

PERHAPS the most important business transacted at the recent meeting of the American Medical Association, held in New Orleans, was the adoption of a new code of medical ethics. Dr. Harris, who read the proposed enunciation of principles of ethics, before doing so read the following special report in explanation of the action of the general committee on code.

To the President and Members of the House of Delegates.

Your committee has given extended and careful thought to the proposed revision of the code of medical ethics referred to it for consideration. As you will note on caption of report, the word "code" has been eliminated and the expression "the principles of medical ethics of the American Medical Association" adopted as adequately descriptive. In reference to this change it is proper to say that such action on its part is based on the idea that the American Medical Association may be conceived to occupy some such relation to the constituent State associations as the United States through its constitution holds to the several States. The committee for this reason regards it as wiser to formulate the principles of medical ethics without definite reference to code or penalties, thus leaving the respective States, &c., to form such code and establish such penalties as they may regard to be fitting and proper for regulating the professional conduct of their members, provided, of course, that in so doing there be no infringement of the established ethical principles of the association. The committee regards as wise and well intended to facilitate the business of the parent organisation and promote its harmony, this course, which leaves to the State association large discretional powers concerning membership and other admittedly State affairs.

The report, which is voluminous, contains three chapters and 53 sections. It would seem to cover the whole ground of professional ethics. Perhaps the most far-reaching and radical change in the code is that embodied in Section I., Chapter 2, which reads:—

Everyone on entering the profession and thereby becoming entitled to full professional fellowship incurs an obligation to uphold its dignity and honour, to exalt its standing, and to extend the bounds of its usefulness. It is inconsistent with the principles of medical science and it is incompatible with honourable standing in the profession for physicians to designate their practice as based upon an exclusive dogma or a sectarian system of medicine.

Utilising Refuse from a Consumption Sanatorium.

The Third Appellate Division of the Supreme Court of New York had under consideration a case of conviction for disobedience of a lawful order of a board of health. It held that unless the order disobeyed was one lawfully made by the board of health the accused had been guilty of no crime. The order was one forbidding him from drawing into the corporate limits of the village any more refuse from the table and kitchen of a sanatorium for consumptives which he had been collecting for food for his chickens and hogs. There was no proof that this refuse from the sanatorium for consumptives was any more dangerous to the community than the refuse from any hotel and the court could not assume such to be the case in sustaining this conviction. Had the board of health, then, the right to forbid a person from bringing into the village refuse from any hotel or other public house, the court asked. Under the evidence in this case, it said, such refuse while it was fresh was wholesome food for hogs and fowls. The menace to the public health lay in permitting it to remain until it decayed and threw off a stench which was prejudicial to the comfort of the community if not to its health. As long, therefore, as the mere bringing into the community fresh refuse from a public place had in it no element of threatened danger to the comfort or health of this community the court was unable to see by what authority the board of health was permitted to prohibit the same. For this reason, it was added, the commission of a crime had not been proved and the judgment of conviction must be reversed.

The Sanitation of Cuba.

In a recent issue of the *New York Sun* is a long article on "The Sanitation of Cuba." This article would appear to minimise somewhat the importance of the work done by Americans in cleaning up the towns of Cuba. A part of the article in question runs as follows: "In view of all that has been said of the sanitary work of the United States in Cuba there are certain facts which stand in glaring prominence before the thoughtful investigator. For instance, virtually all of the work done has been purely superficial. With any suspension of broom-and-shovel energy every city in the island, with the possible exception of Santiago, which got a considerable amount of permanent paving, would speedily revert to its former condition under the Spanish rule. Little or none of our work has been either radical or lasting. A second point appears in the fact that to American authority is due the direct prevention of more radical measures. The Foraker law, most commendable in its general purpose and operation, prevented the granting of any concessions or franchises for public work. The sewering and paving of the city were definitely obstructed and delayed by American officials." The article goes on to say that Cuba is to-day little improved in her real sanitation beyond her condition in January, 1899. This account would seem to be on the face of it and judging from results decidedly prejudiced. The fact remains that in all the towns of Cuba the death-rate has been decreased and yellow fever apparently abolished. Surgeon-General Wyman of the Public Health and Marine Hospital Service, declares that Havana can no longer be regarded as an "endemic centre" of yellow fever, for under American rule followed by the new insular government Havana has become one of the most healthy cities of the world. In his opinion the time has passed when it was necessary to disinfect every ship that arrived at a southern port from Cuba. The Louisiana board of health, however, insists on the disinfection of vessels arriving at ports in that State from Havana and other Cuban ports and the authorities in Alabama have taken a similar course.

May 29th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Infectious Disease in Victoria.

TYPHOID fever is unusually prevalent just now in Victoria. So also is scarlet fever. An epidemic, of local origin, from water pollution has occurred at a camp of workmen employed on irrigation works at Waranga. There are about 500 people living in the camp and 45 have been attacked with typhoid fever, two fatally. Dr. D. A. Gresswell, chairman of the Board of Health, inspected the camp and found that the water-supply was seriously polluted. In the metropolis all cases of infectious disease are taken to the Melbourne Hospital which has not nearly sufficient accommodation for them. The Queen's Memorial Hospital for Infectious Disease still remains unopen but there is some prospect of a satisfactory arrangement being come to. The committee of the

Melbourne Hospital, and also representatives of the municipalities, interviewed the Minister of Health and explained the position, with the result that the Minister promised to recommend to the Cabinet that the Government should pay half the cost of maintenance. For the fortnight ending April 11th 206 cases of scarlet fever were reported, whereas for the corresponding period last year 17 cases occurred.

The Use of Preservatives in Food in New South Wales.

A recent regulation of the Board of Health of New South Wales sets out that boric acid should only be used in the manufacture of concentrated milk, among other things, in the proportion of $\frac{1}{1000}$th of a grain per pint or per pound. This means that practically no preservative at all should be used, for the quantity set out would not have the slightest effect on the milk. The Board of Health, along with other sanitary authorities, believes that none is required, but according to the wording of the statute a certain amount must be specified. That is why the absurdly small proportion of $\frac{1}{1000}$th of a grain is fixed upon. On the other hand, it has been represented to the treasurer that unless some modification is made in this regulation it will be impossible to carry on the industry. The State treasurer held a conference with the board on April 14th with the view of ascertaining whether a compromise could not be effected which, while safeguarding the public interest, would enable the manufacturers to proceed with their business. However, after consultation it was decided to adhere to the board's regulation.

An Alleged Cancer Cure.

A deputation, styling itself the Victorian Cancer Research Association, waited on the chairman of the Board of Health to submit three alternative propositions. The first was that a departmental scientific inquiry should be made as to the effectiveness of an alleged cure for cancer practised by a layman calling himself "Professor" Davis; secondly, that a medical man should be selected to work with the "professor" who should be immune if a patient should die under treatment; and, thirdly, that the Government should purchase the specific if cures were effected. The deputation was most enthusiastic in its advocacy of the new treatment, stating that the "professor" had succeeded where medical men had failed. It professed to have a horror of the knife of the surgeon and to have a profound belief in the remedy applied. Dr. Gresswell, in reply, pointed out that in four out of five cases in which patients had died under the "professor's" treatment a considerable quantity of arsenic had been found in the bodies. Further, he said, the "professor" did not claim to cure internal cancer, only superficial growths, and these were cured by medical men, in some cases without resort to the knife. He had no doubt that the ingredients of their lotions were similar to those used by the "professor," only that they were applied in different quantities. As the "professor" would not disclose his secret he saw no use for a Government inquiry. As to the second proposition he had no power; it involved an alteration of the present law of the land. He concluded the interview by stating that the deputation had not shown him how he could help it at all in the matter.

Hospital News.

The report presented to the annual meeting of the supporters of the Prince Alfred Hospital, Sydney, stated that the hospital had now been opened for 20 years and would attain its majority on Sept. 25th next. As it had grown in years, so it had grown in usefulness, and during the past year showed an advance in every respect. The number of in-patients reached its high-water mark in 1901 and last year the number was practically maintained, while the serious operations numbered almost 200 more than in the previous year, the total having reached 2077. The congested state of the wards, to which reference had been made year after year, had continued, so that with 236 beds available there were 230 always occupied on the average, which meant that on some days there were a great many more than this number. As a matter of fact, as in 1901, no less than 252 patients had been in residence on certain days. This meant that shakedowns and other temporary accommodation had to be resorted to, but this state of things would be remedied when the new pavilions were opened.—The governors of the Melbourne Hospital decided last year that the honorary staff should be increased by the appointment of a fifth indoor physician and a fifth indoor surgeon. The committee has given effect to this decision by appointing the senior physician to out-patients, Dr. J. E. Nihill, and the senior surgeon to out-patients, Mr. G. A. Syme, as physician and surgeon to in patients respectively; to the positions on the out-patient staff thus made vacant the committee has appointed, as physician, Dr. J. F. Wilkinson and as surgeon, Dr. J. Gordon.

A Medical Man committed for Perjury.

At the Fitzroy (Victoria) Court Dr. Abraham Wheeler was committed for trial on a charge of perjury. On March 25th Dr. Wheeler was fined for using insulting language and on that occasion swore that he did not use the language attributed to him. In so swearing he was stated to have committed perjury. The evidence was conflicting, but the police magistrate considered a *primâ-facie* case had been made out and he would leave the matter for a jury to decide.

Obituary.

The death is announced of Dr. Richard Ryther Steer Bowker, M.L.C., at the age of 88 years. For some time past he had been ailing and on April 3rd he passed peacefully away. Dr. Bowker was born in Lincolnshire in 1815. At the age of 16 years he was apprenticed at the Nottingham General Dispensary. After serving his time there he became a student of medicine in Scotland, afterwards in London, and finally in Paris. He commenced to practise at Bingham in Nottinghamshire at the age of 22 years, and quickly gained an extensive practice. But his health failing him he was compelled to take a long sea voyage, so he obtained an appointment as medical superintendent of an immigrant ship and ultimately settled in Newcastle, New South Wales. Again his medical skill and genial disposition soon won for him a large practice and a number of friends. When he first settled in the colony he associated himself with many public movements and the services he rendered to Newcastle were recognised by his fellow townsmen who in 1856 asked him to stand for Parliament. He was elected to the Assembly in the same year, but on the dissolution of the House in 1859 did not offer himself for re-election. He removed to Sydney shortly afterwards and was in 1877 again elected as one of the free-trade representatives of Newcastle. Subsequently he was appointed to the Legislative Council and although he never took a very active part in politics he was a constant attendant at the House. Although of late years Dr. Bowker, owing to his extreme age, was practically compelled to give up the practice of his profession, he was in his prime one of the most skilful surgeons in Australia and earned for himself a great reputation as an ophthalmic surgeon. In 1858 he married Lydia, the youngest daughter of Mr. Phillips of the Paterson, who died in 1878 Three daughters and five sons, all of whom are medical men, survive him.

May 4th.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN.—This hospital is being rebuilt and reorganised. The sum of £50,000 is urgently needed and this need will be brought before the eyes of the public by means of a captive balloon which is to float over the site. The ladies' committee which has been formed to help the hospital will meet about the end of June.

LITERARY INTELLIGENCE.—Mr. Heinemann has just ready for publication a small volume entitled "Hay Fever and its Successful Treatment." Sections are devoted to its history, causes, time of occurrence, duration, &c., and there is a discussion upon the pollen theory. The author is Mr. Hollopeter, clinical professor of pediatrics in the Medico-Chirurgical College of Philadelphia and a Fellow of the American Academy of Medicine.—The following books will be published in June by Messrs. J. and A. Churchill: "The Microscopical Examination of Foods and Drugs," by Mr. H. G. Greenish, professor of pharmaceutics at the Pharmaceutical Society; "Serum-Therapy," by R. T. Hewlett, professor of general pathology and bacteriology, King's College, London; "Disinfection and Sterilisation for Nurses and Others," by Dr. F. W. Andrewes, lecturer on pathology at St. Bartholomew's Hospital; "Modern Bullet Wounds and Modern Treatment," by Major F. Smith, R.A.M.C., D.S.O.; "On Syphonage and Hydraulic Pressure in the Large Intestine," by Dr. R. W. Leftwich; "An English Handbook to the Paris Medical School," by Dr. A. A. Warden, physician to the Hertford British Hospital, Paris; the second edition of "Infant Feeding," by Dr. E. Cautley; the fourth edition of "Lectures on Medicine to Nurses," by Dr. H. E. Cuff; and the fifth edition of "Uric Acid," by Dr. A. Haig.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

SATURDAY, MAY 30TH.

THE Council resumed its proceedings, Sir WILLIAM TURNER, the President, being in the chair.

Final Examinations.

Mr. BRYANT moved the adoption of the reports from the Examination Committee on the inspection of the final examinations of the Universities of Victoria, Durham, and Cambridge which were received and entered on the minutes yesterday.

After a brief discussion on minor points of detail the motion was adopted.

The Society of Apothecaries of London.

Mr. BRYANT presented a report from the Examination Committee on the inspection of the primary examination in chemistry, physics, and biology of the Society of Apothecaries of London. The committee stated:

This examination is in many respects similar to the examination held by the English Conjoint Board in the same subjects. The latter body does not accept the Apothecaries' examination in lieu of its own. The Apothecaries' Society does accept the examination of the Conjoint Board. Certain points of difference between the two are indicated in the report of the visitors.

Biology.—There is no paper and no practical test, the examination, as at the Conjoint Board, being of a purely oral character. Conducted on the same lines as the last-mentioned examination and, as far as the visitors could judge from the two candidates who alone presented themselves for it, the examination is of a very similar standard. The visitors consider that the examination would be much improved by the addition of a paper and practical work. This committee agrees with the visitors in the recommendation to add a written and practical part to the examination in biology.

Physics.—The paper work in connexion with this subject consists of two questions on the same paper as that dealing with chemistry; of these questions one must be answered. In this respect the examination agrees with that of the Conjoint Board, but in addition there is an oral examination, a feature which is lacking in the other case. The oral examination forms a part of that dealing with chemistry and the report shows that it is of a practical character. The practice of the Society in requiring an oral examination is commended by the visitors. They suggest that three questions should be set in the physics section of the paper, that the candidates should be required to answer at least two of these, and that no candidate should be allowed to pass in physics should he fail to secure adequate marks in that subject, even if he should obtain 50 per cent. on the entire paper. With these recommendations the committee concurs and in addition desires that the subject of physics should be dealt with in a separate paper.

Chemistry.—This examination closely resembles that of the Conjoint Board, being, according to the opinion of the visitors, stronger in one respect and weaker in another. It is stronger in that every candidate is required to submit to an oral examination, a test which is only demanded from those on the line by the regulations of the Conjoint Board. On the other hand, it is reported that the practical examination does not include the preparation and exhibition of specimens of compounds. The visitors regard this as the most valuable part of the practical work demanded by the Conjoint Board. With respect to the practical examination the visitors report that the standard is too low and that "it is of a kind that is of extremely little value, either as a training for the student's intellectual powers, or as a preliminary to the study of physiology, or as giving him something that would be useful to him in his future career." From what has been said it will be gathered that the visitors do not regard this examination as a sufficient test for medical students at the end of their first year in the subjects with which it deals. With this view the committee concurs. The court of examiners in its reply thanks the Council for its report, and promises that it shall have careful consideration.

The committee trusts that the deficiences to which attention has now for the first time been called will not merely be noted by the court but that they will be rectified and thus bring the examination up to a sufficient standard. The committee is in agreement with the visitors "that the average training of candidates is insufficient for men who are commencing medical studies."

On the motion of Mr. BRYANT the report was received and entered on the minutes and its consideration was postponed till the special meeting on July 15th.

The Finances of the Council.

Sir VICTOR HORSLEY presented the following report from the Financial Relations Committee of which the President is chairman:—

It was resolved that the committee approve, and recommend the General Council to adopt, the President's memorandum on the present inadequacy of the income of the Council as the basis of an appeal to the proper authorities. The committee proceeded to consider a summary of suggestions received from members and the General Registrar as to economies that might be practised by the Council. The committee cannot recommend the General Council to adopt any of the modifications suggested for the conduct of penal business. As to the days of the session and their duration, the committee recommend that one hour be added to the daily session of the Council and that the hours of sitting be from 1.30 till 6.30, except on Saturday. The committee also recommend that on the first day of each session of the Council standing committees should meet at 12 o'clock noon. Of the suggestions made as to the fees of members, the committee approve the following:—1. That members should be paid for their services, and that the fee should continue to be £5 5s., as at present. 2. That the travelling expenses of members by rail and steamer should, in accordance with the approved practice in the public service, be limited to the actual outlay, together with some fixed allowance, say one guinea, for incidental expenses to and from London. The committee have no suggestions to make as to amendments in the rules of debate. The committee recommend the Council to appoint a small committee to consider the question of the site of the Council office, to consult an expert valuer as to the value of the Council's property in Oxford street and Hanover-square as a whole or in parts, and report to the Council. With regard to printing, the committee recommend:—1. That the issue of the second half-yearly volume of the minutes should be discontinued. 2. That the supply of the yearly volume of minutes to be ordered should be 200 instead of 300. 3. That as soon as possible the printing of the Medical Register should be transferred to the Council's own printer. 4. That 1000 copies should be ordered each year instead of 1350 as at present. 5. That application should be made to the Treasury for leave to raise the price of publication from 6*s.* to 10*s.* 6*d.* The committee postponed the consideration of the Medical Acts Amendment Bill, which was included in the reference, pending the result of an appeal to the Government for a grant towards meeting the deficiency in the Council's income.

Sir VICTOR HORSLEY moved the adoption of the recommendation.

That the Council adopt the President's memorandum on the present inadequacy of the income of the Council as the basis of an appeal to the proper authorities.

Dr. WINDLE, in seconding the motion, said that the President's memorandum contained a reference to the Incorporated Law Society which received a grant from the Treasury and he (Dr. Windle) would suggest that a reference should also be introduced in relation to another body which had powers almost analogous to the General Medical Council—namely, the Teachers' Registration Council which was formed under the powers of the Education Act of 1899. The latter body was not responsible to the Privy Council like the General Medical Council, but was responsible to the Education Department. The income of the Teachers' Registration Council would never reach more than £800 or £1000 per annum and the expenses could hardly be less than £2000 a year. When the Order in Council was laid on the table of the House of Commons a question was raised by a Member as to the financial position of the body and it was pointed out that it was impossible that it could be self-supporting. The reply of Sir John Gorst was to the effect that in that case the Education Department would have to make good the deficit. Dr. Windle would therefore suggest that the Teachers' Registration Council would be a very proper parallel to introduce into the President's memorandum.

The PRESIDENT said that he would consider the matter.

Dr. NORMAN MOORE said that he could not agree to the committee's recommendation. The Council had no right whatever to ask for money from any public body. The present session showed that they did not manage their business affairs in a satisfactory way. The cases that were brought before them by the Penal Cases Committee were drawn up in a way which led to an enormous waste of time. Speaking generally, he was entirely opposed to the principle of going to the Government and asking for public money. If the Council passed a resolution that the fees for registration ought to be increased they would be trying to get money from their own profession. He should disapprove of that, but he should disapprove of it much less than applying to the Government for a grant. He thought that the Council had in a variety of ways endeavoured to grasp powers which were beyond it, and had given an amount of time to various subjects which it would have been much better if it had left alone. Therefore, he was opposed to making any request for a grant of public money.

Mr. BROWN did not think the time had arrived when an appeal should be made for a grant from Parliament. When he considered that the Council had invested in its buildings something like £40,000 and had other investments he could not see that its financial state was such as to necessitate an appeal to Government for money. Before it applied for public money, or for powers to exact more money from the medical profession, it should spend what it had. He believed that much of the time of the Council might be saved in connexion with the work of the Penal Cases Committee.

Sir VICTOR HORSLEY as a member of the Penal Cases Committee objected on a point of order to Mr. Brown's and

Dr. Norman Moore's remarks. If the administration of the Penal Cases Committee was to be challenged it ought to be done on a direct issue. It was not fair to introduce the matter into a debate on the finances of the Council.

The PRESIDENT agreed with Sir Victor Horsley in his objection.

Dr. NORMAN MOORE said he was not attributing any errors to Sir Victor Horsley or anyone else. It was the methods of the Penal Cases Committee, not the conduct of individual members, that he objected to. He had criticised the general way in which the business was done.

Mr. BROWN said he was endeavouring to show that if the penal cases, instead of being referred to the Penal Cases Committee, were referred to the branch councils the expense would be infinitely less than it was under the present procedure.

The PRESIDENT pointed out to Mr. Brown that he was now raising a wider question than that immediately before the Council.

Mr. BROWN concluded by saying that he would vote against the motion because the Council had not yet exhausted its resources.

Sir CHRISTOPHER NIXON said that the work of the Council had very considerably increased in recent years and additional duties had been imposed upon it. If it was in the interests of the public at large that it exercised these duties, and especially in connexion with its penal jurisdiction, he did not see why the State should not pay the expenses that were incurred by the Council in carrying out that work. Why should the State not contribute to the legitimate expenses that were incurred by the Council in protecting the interests of the public? He thought that the Council had much more reason to apply to the State than to ask the medical profession to penalise itself to carry out work which was done in the interests of the State and the public at large. If the State refused to grant them any money the only alternative they had was to impose a penalty on the profession.

Dr. FINLAY thought that the strong justification for applying to the Treasury was the fact that so much of the work of the Council was in the interests of the public and not in the interests of the medical profession *per se*.

Dr. LITTLE supported the motion.

Sir JOHN TUKE pointed out that if a grant to the Council was placed on the Estimates it would be subject to the review and criticism of the House of Commons and to that extent the Council would lose its independence.

Dr. BRUCE said that the only criticism he could offer in connexion with the Penal Cases Committee was that perhaps it did not take as much legal advice as it might do.

The PRESIDENT did not think that the position of the Penal Cases Committee was fully understood. That committee was in the position of a grand jury. There were certain *primâ facie* facts brought before it and all the committee did was to say whether there was a *primâ facie* case. All the cases had to be thrashed out in the Council and there was a quantity of evidence brought before the Council which the committee could not have before it. The committee exercised its judgment in the best way it could on the facts presented to it in the preliminary stage of the inquiry.

Mr. BRYANT: We have both our legal advisers with us in every case.

Dr. PYE SMITH said that in dealing with money as trustees for other people there was one vice to be avoided—namely, profligate expenditure; but there was also another vice—namely, penuriousness and niggardliness, and they had to hit the golden mean. The golden mean was proverbially difficult to traverse. He ventured to think, if this motion was passed, that when they went to the Government and asked for help they would be met by this question: "How have you dealt with your money already?" and he doubted whether they could offer a complete justification for their expenditure. Their first business was to see what they could do with the money they had, and when, after making all retrenchments compatible with efficiency, they found that their funds were not sufficient, then they might justly go to the Government for help. He thought if they were asked they should have to confess that they did spend too much time in unprofitable wrangling and too much time in long meetings. And now they were threatened with more frequent meetings—more than two sessions in the year—and they were allowing the number of members of the Council and the number of their sittings to increase almost every year without taking any measures to prevent it. Before giving up their independence by applying for public money he thought they should use every means in their power to see what they could do to limit their expenditure. He would remind the Council of the blessed words, "Peace, retrenchment, and reform."

Dr. MACKAY said that Dr. Pye-Smith talked about the Council giving up its independence by applying for public money. He believed that no member of the Council would care to sacrifice his independence in that way. But he would point out in this connexion that the universities of Scotland, though they received a grant from the Government, were absolutely free from any interference or control except in so far as Parliament could by a special Act interfere with every institution in the country. If the Council got a grant from the Treasury—and he thought it should—it would not be accompanied by any condition which would hamper the work of the Council.

The PRESIDENT said that if the Council got money from the Treasury with the sanction of Parliament and that money was not on the Consolidated Fund it would be subject to review year by year when the vote was taken in the House of Commons. The moment the House had a vote submitted to it for consideration any Member could criticise and discuss it.

Dr. MCVAIL said he was a little confused by Dr. Pye-Smith's speech. He had now applied to the Council the term "profligate"

Dr. PYE-SMITH: No; I did not apply the term "profligate" to any member of the Council. What I said was that the Council should avoid the vice of "profligate expenditure."

Dr. MCVAIL said that if the Council was spending too much money surely the very best thing to do was to bring its profligacy under the notice of Parliament annually. He would welcome Parliament having annually the power of reviewing the work of the General Medical Council. He thought its action ought to be open to the inspection of Parliament. The Council was still in the possession of considerable funds. Was it a good time to apply to the Government for more money when it was in possession of a considerable surplus? Was it certain that in coming years the Council would have as much penal work to do? "Covering" cases had practically disappeared; the men now entering the medical profession were more highly qualified; and he anticipated in future years a considerable diminution in the number of penal cases that came before the Council. He was not at all in despair that the Council would be able in the future to save money, because he thought it was almost certain that its penal work would decline. He should therefore feel disposed to let this matter rest for the next two or three years. He did not think that the Government was in the least degree likely to listen to them if they made an appeal for more money at the present time.

Sir VICTOR HORSLEY, in replying to the discussion, said he hoped to bring up the whole question of penal work in a future session. Dr. Pye-Smith reminded the Council of the blessed words, "Peace, retrenchment, and reform," but there was another blessed word—"efficiency." It was just that efficiency which the Council lacked at the present moment because they were spending their accumulated funds. They had spent £10,000 in the last seven years. The President's memorandum would for the first time draw the attention of the Government to the position of the Council. In order to do its work it required more money.

On a division Sir VICTOR HORSLEY'S motion was carried by 21 to 3.

The PRESIDENT: It is quite evident that the memorandum will have to have an alteration made in it in the direction indicated by Dr. Windle. When shall I do it?

Sir VICTOR HORSLEY: That must be left to your convenience. I move, Sir, recommendation No. 2, viz.:—

2. That the following resolutions be adopted and:—
(*a*) That the Council meet each day except on Saturday at 1.30 P.M. and shall not sit after 6.30 P.M. (*b*) That standing committees meet at 12 noon on the first day of each session of the General Council. (*c*) That the travelling expenses of members by rail and steamer be limited to the actual outlay, together with one guinea for incidental expenses to and from London. (*d*) That a small committee be appointed to consider the question of the site of the Council office, to consult an expert valuer as to the value of the Council's property in Oxford-street and Hanover-square as a whole or in parts, and report to the Council. (*e*) (1) That the issue of the second half-yearly volume of the minutes be discontinued. (*f*) (2) That in future 200 copies only of the yearly volume of minutes be printed. (*g*) That as soon as possible the printing of the Medical Register be transferred to the Council's own printer. (*h*) That 1000 copies only of the Medical Register be ordered each year. (*i*) That application be made to the Treasury for leave to raise the price of publication of the Medical Register to 10*s.* 6*d.*

Sir JOHN TUKE seconded the motion.

Sir WILLIAM THOMSON opposed the extension of the daily

sittings as proposed in (*a*). Even now when five o'clock was reached he felt that they did not care very much for the business. He did not think the work could be better done by adding to the hours for doing it.

Mr. JACKSON quite agreed with Sir William Thomson. He thought before he came to the Council that it did not work hard, but since he had been a member he had found out differently.

Mr. BROWN moved that the Council should not sit beyond six o'clock.

Dr. MACALISTER seconded this proposal. At present six o'clock meant seven to the Business Committee.

On a vote Mr. Brown's proposal was defeated by 13 votes to 11, and the Financial Relations Committee's recommendation (*a*) was rejected by 16 votes to 12. The other recommendations except (*d*) were carried; (*d*) was taken *in camerâ* and no announcement was made of the result of the consideration.

On the motion of Dr. MACKAY and supported on a vote by 21 members it was agreed—

That the fee for re-registration be raised to £1, that the fee for the registration of each additional qualification be raised to £1, and that the fee for public health registration remain as at present.

Finally, the Executive Committee was requested to take steps for making changes in the Standing Orders where necessary to bring them into conformity with the several motions passed.

Finance Committee's Report for 1902.

Mr. BRYANT moved that the following report, to which were appended the several carefully compiled tabulated statements referred to in it, should be received and entered on the minutes:—

The Finance Committee report that the income of the General and Branch Councils for the year ending Dec. 31st, 1902, was £8591 8*s*. 7*d*.; the expenditure for the same period was £9924 6*s*. 8*d*., consequently there is a deficit on the year's working of £1332 18*s*. 1*d*.

From Table A it will be seen that the receipts from fees show a decrease of £349 8*s*., the English Branch having received £49 5*s*. less, the Scottish Branch £346 6*s*. less, and the Irish Branch £45 17*s*. 6*d*. more than in the previous year.

A statement of the expenditure of the General Council compared with former years will be found in Table B. The following items call for explanation. (*a*) An increase of £793 16*s*. in General Council fees, mainly due to the special session in February which cost upwards of £650, though against this may be set the decrease of £30 in the cost of the Executive Committee meetings due to one payment for travelling expenses covering both meetings. (*b*) An increase of £115 1*s*. 6*d*. in law expenses; the case of W. A. Jones alone cost over £100. (*c*) An increase of £143 7*s*. 3*d*. in the cost of inspection of examinations due to the larger numbers of bodies under review. (*d*) The sinking fund and grant to the Irish Branch are dealt with below.

It will be noticed that wherever possible expenses have been kept down and that there has been a considerable economy in such items as printing and miscellaneous expenses. Table C shows comparatively the income and expenditure of the Branch Councils for the past three years; the English Branch had again to meet the expenses of a contested election. From Table D it will be found that the excess of expenditure over income is about £170 less than the average for the past seven years. The percentage-rate is 94·48, which is 1·66 above the average. Table E shows that the assets of the branches have decreased by the amount of the year's deficit. The Pharmacopœia accounts, as will be seen from Table F, show a profit of £549 12*s*. 10*d*., which is mainly due to the sale of the Government of India Edition of the Indian and Colonial Addendum. Of this sum £500 has been placed on deposit with the National Provincial Bank of England, being repayable at call and bearing interest at current rates, which roughly may be taken to be 1½ per cent. below Bank rate. The Bank of England allows no interest on deposits.

Sinking fund.—In accordance with the resolution of the Council notice was given to surrender the policy, the value of which proved to be £408 16*s*. The amount paid in premiums was £846 17*s*. 6*d*., so that practically one year's premium was lost. The value of the policy has been credited to the General Council's receipts and it should be noted that the deficiency on the year's working is thereby decreased from what it would otherwise have been.

Irish Branch.—It was not thought necessary last year to give a grant to the funds of the branch and the result was that at the end of the year the net balance in hand was £78. It may be assumed that the receipts this year will be approximately the same as last—say £300—and it is expected that the expenses will be £100 less owing to the change in office arrangements; on this basis there will be a deficiency at the end of the year of about £250, and the committee therefore recommend that a grant of £300 be made towards the funds of the branch.

Dental Finance.—Table G shows that there was a surplus of income over expenditure of £249 12*s*. 10*d*. A further sum of £600 has been advanced to the English branch.

On the motion of Mr. BRYANT, seconded by Dr. PYE-SMITH, it was agreed:—

That a grant of £300 be made towards the expenses of the Irish Branch Council for the current year.

Canadian Practitioners.

Mr. TOMES asked the President, in reference to the suggestion for an amendment of Part II. of the Medical Act, 1886, contained in his address to the Council, whether he could state that that suggestion was likely to be favourably regarded by the Government of the Dominion of Canada or by the medical authorities who had given their adhesion and support to the Canada Medical Act, 1902.

The PRESIDENT: I think the best way to reply to this question is to give a little narrative of the circumstances which led me to make a reference to it in my opening address. It was largely due to the interest one takes in endeavouring to put Canadian medical practitioners on a proper footing as regards our British Medical Register. At last November meeting I dwelt for some time on the Canadian Act so as to show what that Act was to do and to show that if Canada carried out the provisions of that Act there should be reciprocity. But at the end of April or beginning of May Sir John Tuke put into my hands a letter received by him from Dr. Roddick, a member of the Canadian Legislature—the member who carried through this Act—which contained these words:—

You are probably aware that before the Canada Medical Act, 1902, could come into operation it was necessary that all the provinces should consent to the measure. I regret to say that within the last few days the legislature of the province of Quebec rejected the measure by a large majority. This, of course, puts a stop to my work for the present, and unless I succeed in getting an amendment through the Dominion House, of which I am a member, during the present session it is possible that the Act could not come into operation for many years. I can, therefore, no longer advise those interested to interfere with General Laurie in his laudable endeavour to assist Colonial graduates to serve the empire in the naval and military and civil services of the Crown.

In view of the fact that Quebec would not give up its independence and come under the general scheme, which made it quite clear that we could not look for several years for Canada being brought into line with, say, Australia, I called attention to the matter. You will observe that General Laurie's Bill proposed the overcoming of the difficulty—that is to say, that the Privy Council might put certain provinces on the basis of reciprocity. That was the matter that went through my mind at the moment and that is the reason why I made the suggestion. The whole question is under the consideration of the home authorities and something must be done because it is manifestly in my judgment most unjust that whilst practitioners coming from Australia can enter easily into the service of the Crown practitioners coming from Canada cannot. To come to the question—I am unable to say whether the suggestion I have made is likely to be favourably regarded.

Sir JOHN TUKE: General Laurie has introduced a revised Bill in which the federation of Australia is taken into account.

The PRESIDENT: Yes; prior to two years ago Australia was treated as three different States and reciprocity was given to each of these three. Now that these States are federated into a great Commonwealth it is a question how far we can recognise reciprocity as between the home country and them. They are Victoria, New South Wales, and South Australia. The question of Canada and Australia must be considered so as to place the subject on a general footing.

Mr. TOMES said that he also had received a letter from Dr. Roddick in which the writer of it stated that he had knowledge of General Laurie's Bills and that letter conveyed rather a different impression from that received by Sir John Tuke. Dr. Roddick pointed out that he would not hinder in the slightest the adoption of General Laurie's scheme, but he should prefer that his own Bill should become operative. He believed also that the Dominion Parliament would assent to his Bill, for five or more provinces had adopted it. All the provinces except Quebec were in favour of it. He (Mr. Tomes) concluded by moving—

That the President be requested to communicate with the proper authorities in order to ascertain whether the suggestion made in his address as to reciprocity for Canada is likely to be favourably regarded by the Government of Canada or by the medical authorities who have given their adhesion and support to the Canada Medical Act, 1902.

Sir VICTOR HORSLEY seconded this motion and the Council agreed to it.

Dental Examination and Education Committee.

On the motion of Mr. TOMES the following report was received and entered on the minutes:—

The committee met on Wednesday, May 27th, 1903.

An Act relating to the practice of dentistry, South Australia, 1902, has been referred to your committee for its information. In this Act all of the dental licences of this country, as well as that of the Dental College of Sydney, are cited as entitling to admission to the Register and power is given to recognise such other diplomas as the board may think fit and, subject to the fulfilment of a condition, that of the University of Adelaide is added to the list of recognised degrees. The

prohibitory clause is directed against the use of titles and not against the act of practice, but is of such sweeping character that it would be almost impossible to make use of any description which would indicate the nature of the business conducted without contravening it, and it is expressly stated that in every respect the provisions of the Act shall apply to companies or other plurality of persons.

An Act to provide for the registration of dentists qualified to practise in Queensland, 1902, has been submitted to your committee. In this Act also the principle of prohibition of title has been adopted, and there is no express prohibition of the act of practice. But, as in the South Australian Act, the prohibition is very stringent, as "no description implying or tending to the belief that he or such company or association is registered under this Act, or is qualified to practise dentistry, or is carrying on the practice of dentistry," can be used by unauthorised persons without incurring a fine not exceeding £20 and a further penalty of £5 a day for every day during which the offence is continued after conviction. The stringency of the provisions of these two Acts renders the prohibition of the improper use of titles almost tantamount to a direct prohibition of unqualified practice.

Some correspondence regarding the possibility of a Canadian dentist holding an Ontario diploma in dentistry obtaining registration in this country has been referred to this committee for consideration and report.

In 1900 an application made by the Royal College of Dental Surgeons of Ontario to the General Medical Council was considered (Minutes 1900, pp. 169, 361-67). In this application it was proposed that facilities be reciprocally afforded for the admission of persons holding the diplomas of the one country to the examinations held in the other and suggesting that prior to such admission some period of study ("a senior term") should be taken in the country in which examination was sought. The application contained these words: "It is the opinion of our directors that it would be more satisfactory for the authorities in each country to examine applicants rather than simply to grant them registration."

The Dental Examination and Education Committee reported that this was a matter in which the various licensing bodies must exercise their own discretion, and that it was impossible for the General Medical Council in any way to dictate to them the course which they should take; but that, provided that general equivalence in the curricula is adequately secured, the committee saw no reason why the General Medical Council need offer any objection. Incidentally, in the course of a review of the conditions under which the Ontario diploma is conferred, the committee remarked, "Had the request submitted been for registration this would have sufficed to ensure its refusal."

No formal application for registration is before them, the correspondence being in the nature of an inquiry, so your committee can only refer to the opinion then expressed, to which, the circumstances not having altered, they adhere.

Approval of a Teaching Institution.

The report of the Students' Registration Committee which, on Sir HUGH BEEVOR'S proposal, was received and entered on the minutes, showed that the committee had resolved

That the Polytechnic Institute, Battersea (day classes), be added to the list of recognised institutions approved by the Council.

The Battersea Polytechnic has been adopted as one of the schools for internal students of the University of London.

Officials of the Council.

Dr. MACALISTER moved:—

That the President be requested to express the thanks of the Council to Mr. N. C. King for his services in preparing an index of the Council's minutes (1886-1902).

Sir JOHN BATTY TUKE seconded the motion, which was agreed to.

The PRESIDENT had pleasure in expressing to Mr. King thanks for the work which he had done voluntarily. They were very much obliged to him for the time and labour he had devoted to it.

Dr. MACALISTER moved the re-appointment of Mr. H. E. Allen as general registrar for the Council until the close of the summer meeting in 1904.

The PRESIDENT wished to express how much he owed to Mr. Allen in connexion with business. It would be impossible for a non-resident President to conduct the affairs of the General Medical Council unless he had the careful and active coöperation which Mr. Allen had invariably given, and he always attached the highest value to any opinion that Mr. Allen gave.

The re-appointment was agreed to.

Thanks to the President.

Sir CHRISTOPHER NIXON said that he should like to have the privilege of moving a vote of thanks to the President for the way in which he had presided over their deliberations and the extremely efficient way in which he had maintained order amongst the disorderly members, including himself (Sir C. Nixon).

The PRESIDENT could not conceal from himself that the meeting had been a very trying one—he had never attended a meeting which had strained his attention so much as the present—and he thanked them very warmly, not only for this vote of thanks, but also for the consideration with which those disorderly members among whom Sir Christopher Nixon placed himself had met any suggestion made by him.

The Council rose till July 15th.

Medical News.

TRINITY COLLEGE, DUBLIN.—At examinations held at Trinity term the following candidates were successful:—

Final Examination in Midwifery.—Bertram L. Middleton, William Wiley, John F. W. Leech, John M. Holmes, John F. Nicholson, Edward V. Collen, Henry Stokes, William Boxwell, Henry O'H. May, Reginald W. T. Clampett, Thomas Crean, Augustus B. Tighe, Robert Bailey, James T. M'Entire, and Alexander L. Otway.

UNIVERSITY OF CAMBRIDGE.—The University lectureship in midwifery, now held by Dr. A. F. Stabb, will be vacant at Christmas. An appointment will be made in the Michaelmas term. Candidates are requested to apply to the Vice-Chancellor before Oct. 20th.—Mr. A. C. Seward, F.R.S., has been reappointed lecturer in botany.—The city isolation hospitals, Bristol, have been recognised by the University for purposes of medical study.

PRESENTATION TO A MEDICAL PRACTITIONER.—Mr. George A. Davies, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., J.P., who has practised in Newport (Mon.) for nearly 30 years, has been presented by his friends and patients with a silver tea kettle, a silver tea service, and a diamond ring upon his leaving Newport.

DONATIONS AND BEQUESTS.—By the will of Mr. William Highfield Jones, of Waverley House, Goldthornhill, Wolverhampton, £1000 are left to the Wolverhampton and Staffordshire Hospital.—The trustees of Aston Villa Football Club have presented to the General Hospital, Birmingham, a cheque for £1250, raised by subscriptions, for the endowment of a footballers' bed.

ISOLATION HOSPITAL FOR DAWLISH.—A public meeting, convened by the urban district council, was held at Dawlish on May 28th, under the presidency of Dr. Charles N. Lovely, to consider whether an isolation hospital should be provided from the rates or by voluntary subscriptions. After considerable discussion it was unanimously resolved that the council should be informed that whatever was done should be paid for out of the rates.

THE MEDICAL MAN AND THE BURGLAR.—About 4 A.M. on June 3rd the residence of Mr. W. E. Good, M.R.C.S. Eng., L.R.C.P. Edin., of High-street, Dorchester, Dorset, was entered by a burglar. After ransacking the lower parts of the house the man entered Mr. Good's bedroom and making a slight noise awoke Mr. Good who leaped out of bed and after securing the intruder opened a window and shouted for the police. A constable soon appeared and the man was taken into custody.

DINNER TO DR. G. E. HERMAN.—On June 8th Dr. Herman was entertained at dinner at the Café Royal, Regent-street, London, by his old resident accoucheurs, on the occasion of his retirement from the post of senior obstetric physician to the London Hospital. In the unavoidable absence of Mr. T. Horrocks Openshaw, C.M.G., the chair was taken by Dr. Fenton. In proposing the toast of the evening the chairman eulogised Dr. Herman's valuable work at the London Hospital during the past 27 years and dwelt upon his admirable contributions to obstetrics and gynæcology and the important services which he had rendered to his pupils by his teaching and example. The gathering was most successful, men coming from all parts of the country to show their affection and loyalty to their former chief.

ANNUAL DINNER OF THE WEST LONDON HOSPITAL.—This dinner was held at the Empire Hall of the Trocadéro Restaurant, Piccadilly-circus, London, on June 8th. It forms a regular reunion of the staff of the West London Hospital, present and past, of the present and past resident staff, and of the members of the Post-Graduate College established in connexion with the institution. The chairman of the dinner, Dr. J. A. Mansell Moullin, proposed "The West London Hospital, including the Post-Graduate College, and the Past Residents," and Mr. L. A. Bidwell (the dean), in reply, said that the Post-Graduate College was established in 1895 to supply clinical instruction to medical men in practice in the country and in the colonies. There were a large number of medical officers from the navy and army constantly in attendance. Since the establishment of the college no fewer than 600 medical men had been students and since Jan. 1st as many as

166 fresh members had been enrolled. The West London Hospital was the only important general hospital in London where practice and clinical teaching were reserved for qualified men; a special building for the accommodation of post-graduates had been erected in the hospital grounds and a spacious pathological department would be provided. Sir William S. Church, Bart., K.C.B. (President of the Royal College of Physicians of London), in the course of acknowledging the toast of "The Visitors," proposed by Mr. W. Bruce Clarke, said that in listening to the speeches made that night he was struck by the great confidence everyone felt in the future of the hospital, which was perfectly justifiable because all connected with them knew that the hospitals of London with medical schools could not provide post-graduate courses. In conclusion, he warned his hearers that the hospital must not expect such a large contribution as it had received last year from King Edward's Hospital Fund because it was not reasonable to suppose that every year would yield such a "bumper" revenue as the last year had—a forecast that it is to be hoped will prove incorrect.

Parliamentary Intelligence.

HOUSE OF COMMONS.

MONDAY, JUNE 8TH.

The Infected Blankets.

SIR THOMAS DEWAR asked the President of the Local Government Board whether the hospital blankets which reached this country from South Africa as discarded War Office stores had yet been traced in the towns in the provinces to which they were distributed; and could he say whether the local authorities had in every case taken steps to secure the destruction or disinfection of these infected blankets.—Mr. LONG said: I sent a circular letter to about 200 sanitary authorities in England and Wales in whose districts it was reported that some of the blankets referred to had been received and advised them as to the measures which should be adopted in order to safeguard the public against any possible infection from the blankets. I have not received reports from all the authorities, but, so far as my information goes, I have every reason to be satisfied with the action taken in matter.

SIR THOMAS DEWAR asked the Secretary of State for War whether he had yet received from the General Officer Commanding in South Africa a report explaining the circumstances in which discarded hospital blankets were sold in South Africa; whether he would state the result of the inquiry, the number of blankets sold, and the amount which they realised; and, in the interest of public health, whether he would consider the expediency of issuing instructions that all stores composed wholly or in part of textile fabrics which had been used in the field, whether in hospital or otherwise, should be carefully disinfected before they passed out of the hands of the military authorities.—Mr. BRODRICK replied: The General Officer Commanding, South Africa, reports that in October last, owing to the rapid demobilisation of the troops, an enormous stock of unwashed general service blankets, returned to store by the troops on demobilisation, was stored at the Cape Town Ordnance Stores, stacked in the open under tarpaulins. Efforts were made to have these washed and properly stored, but meanwhile the stacks took fire by spontaneous combustion and endangered the entire ordnance depôt. Prompt action became imperative and the chief ordnance officer gave instructions for large numbers of those in the worst condition to be destroyed by fire and accepted tenders for the sale of 80,000, provided they were removed within three days. Those blankets were not unserviceable though they had not been washed. The amount realised by the sale was £1495. Medical officers have, under the regulations, power to destroy any articles of public property on sanitary grounds and are expressly ordered to disinfect all soiled bedding which has been in contact with the sick. I am not prepared to issue so wide an order as that suggested—that all textile fabrics which have been used in the field should be disinfected before being sold. As previously stated, the ordnance and medical regulations contain clear instructions as to the disposal of condemned or infected articles, and I also issued special orders forbidding the sale in South Africa of any textile article which might convey infection. There appears to have been an error of judgment on the part of the responsible officer who had otherwise done excellent service. The military authorities are investigating the matter.

SIR THOMAS DEWAR asked Mr. Brodrick whether he would state the number of discarded military tents which had been sold in South Africa and the amount which they realised; whether they were disinfected and whether were they sold by tender or by public auction; and whether he would also state the number of hospital tents sold and say whether any, and if so what, steps were taken to secure their disinfection.—Mr. BRODRICK replied: About 2760 tents are known to have been sold, of which only four were hospital marquees. They were sold by auction and tender. The amount realised was £970. Under the medical regulations medical officers are authorised to destroy public property on sanitary grounds when necessary and are also in possession of stringent instructions regarding disinfection. I have no reason to suppose these instructions were disregarded.

Imported Milk.

In Committee of Supply on the vote for the Customs Department, Sir EDWARD STRACHEY raised a debate on the question of imported milk and in particular complained that the Customs Department refuses to give information as regards the names and addresses of persons in this country to whom foreign milk is consigned and by whom it is sold. Sir Edward Strachey and other Members contended that purchasers have the right to know where the milk they buy is produced. The reply made on behalf of the Government was to the effect that the Customs Department has no power to give this information and that the proper line of reform is by way of legislation.

TUESDAY, JUNE 9TH.

The Sewage of Longmoor Camp.

Mr. HEYWOOD JOHNSTONE asked the Secretary of State for War whether it was the intention of the War Office to drain the camp at Longmoor into a brook which is a confluent of the river Rother; and if so, whether he would state what precautions would be taken to render the discharge of sewage into that brook innocuous before it reached the Rother; and whether, before any scheme was sanctioned for the disposal of the sewage from this camp, the opinion of the Local Government Board would be taken as to the suitability of the scheme and as to how far it might fulfil the requirements which it imposed upon local authorities who had to provide for the disposal of sewage.—Mr. BRODRICK replied: It is not contemplated to drain the camp at Longmoor directly into any brook or river. The sewage will be subjected to biolytic treatment on approved principles and the effluent will, as a further safeguard, be subjected to land treatment in accordance with the views held by the Local Government Board.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BALDWIN, G. P., L.R.C.P. & S. Edin., has been appointed a Member of the Military Pension Board, New Zealand.

BEAUMONT, PERCIVAL, M.B. Cantab., has been appointed Physician to the Essex and Colchester General Hospital.

COPLANS, MYER, M.B. Lond., has been appointed Resident Medical Officer to the North-West London Hospital, Kentish Town-road, N.

EATON, OLIVER, L.R.C.P. Lond., M.R.C.S., D.P.H. Cantab., has been re-appointed Medical Officer of Health for Exmouth (Devon).

FLECK, DAVID, M.B., B.Ch., B.A.O. R.U.I., has been appointed Resident Superintendent to the Royal Victoria Homes at Brentry, near Bristol.

HARRISON, W. A., M.B., Ch.M. Edin., has been appointed Acting District Medical Officer, Williams, Western Australia, during the absence on leave of Dr. Roughan.

HAYWARD, WILLIAM THORNBOROUGH, M.R.C.S., has been appointed on the Board of Management of the Adelaide Hospital, South Australia.

HILL, ALFRED WILLIAM, M.D. Brux., has been appointed on the Board of Management of the Adelaide Hospital, South Australia.

ICK, T. R., M.B. Melb., has been appointed Officer of Health at Peak Hill, Western Australia.

KING, F. W. R. J., M.R.C.S., L.R.C.P. Lond., has been appointed a Member of the Military Pension Board, New Zealand.

MORRIS, M. E. H., M.B. Lond., has been appointed House Surgeon to the North Devon Infirmary, Barnstaple, vice Mr. R. Cooke, resigned.

PENBERTHY, WILLIAM, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births and Deaths for the Wiveliscombe District by the Wellington (Somerset) Board of Guardians, vice Mr. J. W. Pratt, resigned.

ROGERS, RICHARD SANDERS, M.D. Edin. and Aberd., has been appointed on the Board of Management of the Adelaide Hospital, South Australia.

SHEPHERD, ARTHUR EDMUND, L.R.C.P., L.R.C.S. Edin., has been appointed Honorary Gynæcologist, Adelaide Hospital, South Australia.

SMITH, JOHN CARMICHAEL, L.R.C.P. & S. Edin., has been appointed Public Vaccinator at Taihape, New Zealand.

TELFORD, E. D., B.C. Cantab., F.R.C.S. Eng., has been appointed Resident Surgical Officer at the Manchester Royal Infirmary, vice Charles Roberts, M.B. Lond., F.R.C.S. Eng., whose period of appointment has expired.

THOMPSON, JAMES, M.B., Ch.B. Melb., has been appointed Acting District Medical Officer at Busselton, Acting Quarantine Officer for the port of Busselton, and Acting Public Vaccinator for the Urban and Suburban Districts of Busselton and Rural District of Sussex, Western Australia.

WACE, R. H., M.B., C.M. Aberd., has been appointed a Visiting Justice to the Gaol at Derby, Western Australia.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

AYLESBURY, ROYAL BUCKINGHAMSHIRE HOSPITAL.—Resident Surgeon, unmarried. Salary £80, rising to £100, with board and apartments.

BECKETT HOSPITAL, Barnsley, Yorkshire.—Resident House Surgeon. Salary £100, with board, lodging, and washing.

BIRKENHEAD BOROUGH HOSPITAL.—Junior Male House Surgeon. Salary £80 per annum, with board and washing.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES, John Bright-street, Birmingham.—Clinical Assistant. Honorarium at rate of 52 guineas per annum.

BIRMINGHAM GENERAL DISPENSARY.—Resident Locums. Terms 4 guineas per week, with apartments.

BRISTOL GENERAL HOSPITAL.—Surgeon, also Assistant Surgeon.

CHESTER GENERAL INFIRMARY.—House Physician. Salary £50 per annum, with residence and maintenance.

CROYDON MENTAL HOSPITAL, Warlingham, Surrey.—Senior Assistant Medical Officer. Salary £160 per annum, rising to £180 per annum, with apartments, board, and washing.

DUDLEY GUEST HOSPITAL.—Assistant House Surgeon, for six months. Salary £40 per annum, with residence, board, and washing.

EVELINA HOSPITAL FOR CHILDREN, Southwark, S.E.—Four Clinical Assistants.

GUARDIANS OF THE POOR OF ST. MARY, ISLINGTON.—Medical Officer and Public Vaccinator for No. 1 District. Salary £100 per annum, with fees.

ISLE OF WIGHT COUNTY HOSPITAL, Ryde.—Resident House Surgeon. Salary £90 per annum.

KENT AND CANTERBURY HOSPITAL.—House Surgeon, unmarried. Salary £90 a year, with board and lodging.

LIVERPOOL EYE AND EAR INFIRMARY.—House Surgeon. Salary £80, with residence and maintenance.

LIVERPOOL STANLEY HOSPITAL.—Third House Surgeon. Salary £70 per annum, with board, residence, and washing.

LONDON HOSPITAL MEDICAL COLLEGE.—Lectureship on Biology. Salary £100 a year and class fees. Also Demonstrator of Chemical Physiology. Salary £200.

LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN, 8, Hunter-street, Brunswick-square, W.C.—Second Demonstrator of Anatomy.

MONKWEARMOUTH AND SOUTHWICK HOSPITAL, Sunderland.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

METROPOLITAN ASYLUMS BOARD ASYLUM, Caterham, Surrey.—Male Assistant Medical Officer, unmarried. Salary £180 per annum, rising to £200, with rations, lodging, attendance, and washing.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant. Salary £160.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Assistant House Surgeon. Salary £50 per annum, with board, residence, and washing.

ROYAL SURREY COUNTY HOSPITAL, Guildford.—Resident House Surgeon.—Salary £100, with board, residence, and laundry.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington, W.—Lecturer on Physiology. Salary £300 per annum.

SHEFFIELD ROYAL HOSPITAL.—Junior Assistant House Surgeon, unmarried. Salary £50, with board, washing, and apartments.

SOUTHAMPTON COUNTY BOROUGH.—Assistant Medical Officer of Health. Salary £150 per annum.

STOKE-UPON-TRENT, NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill.—House Physician. Salary £100 per annum, with board and washing.

UNIVERSITY COLLEGE, London.—Assistant Physician.

WARRINGTON INFIRMARY AND DISPENSARY.—Senior Resident House Surgeon, unmarried. Salary £120 per annum, with residence and board.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Junior House Surgeon. Salary £50 per annum, with board, lodging, washing, and attendance.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician, also House Surgeon, both for six months.

WIGAN, ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Senior House Surgeon. Salary £100, with board, apartments, and washing.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon. Salary £100 per annum, with board, lodging, and washing.

YORK DISPENSARY.—Resident Medical Officer, unmarried. Salary £120 a year, with board, lodging, and attendance.

Births, Marriages, and Deaths.

BIRTHS.

HAWTHORNE.—On May 1st, at Warrawee, Mudgee, N.S.W., Australia, the wife of E. Sydney Hawthorne, F.R.C.S., L.R.C.P.I., of a son.

HENRY.—On June 10th, at Wincott House, 175, Kennington-road, S.E., the wife of G. Nicol Henry, M.B., C.M. Aberd., of a son.

LAY.—On June 6th, at Peasenhall, Saxmundham, Suffolk, the wife of Charles E. Lay, L.R.C.P., L.R.C.S., L.M. Ed., of a son.

STANDAGE.—On May 4th, at Margaret-street, Cavendish-square, W., the wife of Captain R. F. Standage, I.M.S., of a son.

THYNE.—On 5th inst., at Tudor House, Barnet, the wife of W. Thyne, M.A., M.D., of a son.

MARRIAGES.

BURFIELD—GLENNY.—On June 4th, at the parish church, Barking, by the Rev. F. Clyde Harvey, vicar of Hailsham, assisted by the Rev. W. J. Clay, vicar of Bisley, Gloucester, and the Rev. P. M. Wathen, vicar of the parish, Thomas Burfield, M.A., M.B., B.C., eldest son of Joseph Burfield, Esq., of Hailsham, Sussex, to Anna Catherine, fourth daughter of W. W. Glenny, Esq., J.P., of Barking, Essex.

HEWLAND—ALLEN.—On June 6th, at St. Mary Abbot's, Kensington, by the Rev. Canon Somerset Pennefather, D.D., Mary Josephine, youngest daughter of the late David Allen, Esq., J.P., of Belfast, to George Vickerman Hewland, M.D., of St. Leonard's-on-Sea.

PARKINSON—STUART.—At Kenley, Surrey, T. S. P. Parkinson, M.B., to Esther Molyneux Stuart, M.B.

PEARSON—EIGHLEEN.—On June 3rd, 1903, at St. George's Church, Bloomsbury, W.C., by the Rev. F. G. Saint, M.A., of St. Luke's, Westbourne-park, W., Roland Wilfred Pearson, M.R.C.S. Eng., L.R.C.P. Lond., third son of Wm. Pearson, of Fawley, Bradford-road, Wakefield, Yorks, to Emily, daughter of the late James Eighleen, of Hadleigh, Suffolk.

DEATHS.

CAUDLE.—On June 1st, at Millbrook Lodge, Millbrook, Adolphus William Wisdeu Caudle, M.R.C.S. and L.S.A., of Henfield, Sussex, in his 83rd year.

LAWSON.—On June 6th, at Dorchester, suddenly, David James Lawson, M.D. Edin., Portland, Dorset.

NANKIVELL.—On June 7th, at his residence, Ashley Lodge, Torquay, Charles Atkinson Nankivell, M.B. Lond., aged 56. No flowers, by special request.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

PROBABLE NATURE AND LIFE CYCLE OF THE YELLOW FEVER GERM.

DR. CARLOS FINLAY, chief sanitary officer of Cuba, has published in the *Revista de Medicina Tropical* some hypotheses on the subject of the yellow fever germ which, however, has not yet been isolated. He says that the germ is known to require two special hosts for the completion of its life cycle, one of them being the body of a non-immune human being and the other a species of mosquito, and concludes that the germ, like that of malaria, must be a protozoon and not a bacterium. He is led also by analogy to infer that the germ of yellow fever goes through phases of development similar to those of the malaria parasite. He endeavours to show that while the human subject is rightly considered as the permanent host for the germ of malaria it is the stegomyia mosquito which acts the part of a permanent host for the yellow fever germ, the short sojourn of which in the body of the yellow fever patient is such as might be expected of a parasite going through phases of sexual reproduction in the body of its intermediate host. Comparing the known facts regarding the clinical history, etiology, and epidemiology of yellow fever, the striking circumstance is not the parallelism but rather the contrast between the course of events in malaria and in yellow fever. He states the following practical deductions as the outcome of the views expressed in the paper:—

1. The yellow fever germ being the parasite of a small insect must be a much smaller protozoon than the malaria germ which is a parasite of man.
2. The reality of ultra-microscopic germs as promoters of human infectious diseases having now been scientifically demonstrated, it is possible that the germ of yellow fever may be one of that class.
3. For other infectious diseases the germs of which have escaped detection it may be surmised that the germs are, or at one time were, parasites of a very diminutive insect host which either continues unsuspected or may have become extinct.
4. The sojourn of the yellow fever germ in the human body is of short duration, in accordance with its object, which is mainly to secure the preservation of the species by sexual reproduction.
5. The function of sexual reproduction is accompanied by the elaboration of powerful toxins to which must be directly attributed the attack of yellow fever.
6. Apart from the elimination or destruction of the mosquitoes our main reliance for the prophylaxis of yellow fever and malaria should consist in preventing the transfer of the parasite from the intermediate host to the permanent one; this is comparatively easy in yellow fever but for malaria presents almost insurmountable obstacles. There is no great difficulty in preventing a yellow fever patient (intermediate host) from being bitten by and infecting the healthy stegomyia (permanent host).

In the same publication (*Revista de Medicina Tropical*) Dr. Juan Guiteras, professor of pathology and tropical medicine in the University of Havana, contributes a paper on the Duration of Life of the Stegomyia Fasciata or Yellow Fever Mosquito. He says that as this insect retains its infectivity during all its life the facts which refer to the duration of its life are of great interest. From an experiment made at the laboratory it appears that of 11 mosquitoes hatched on August 1st, 1902, which were made to bite on the 5th of the same month a patient with yellow fever no less than five mosquitoes lived over 100 days and one as long as 154 days. These mosquitoes were preserved in a wide-mouthed glass jar covered with gauze; inside the jar were placed a glass of water, some grass, and a lump of sugar. Dr. Finlay and others have proved that the life of the mosquito is short (a few days only) if it is deprived of water, but Dr. Guiteras thought that in a state of hibernation the insects could perhaps live without water. He therefore retained in a wire-gauze cage 33 female stegomyiæ without water, grass, or sugar. They were placed in an ice-box having a temperature between 8° and 10° C. 45 days later 16 mosquitoes survived and at the eighty-seventh day three were still living. The same writer has made some observations on the Shiga Bacillus and Secondary Infections in Yellow Fever. In one case of yellow fever, on the fifth day of the disease a decided agglutination of the Shiga bacillus (belonging to the group of hæmorrhagic bacteria) was obtained in 20 minutes with dilutions of 1 in 50. The patient died on the fourteenth day and continued to the end to give the Shiga reaction and to show hæmorrhagic symptoms. Dr. Guiteras suggests that it is possible that this secondary infection may account for some of the symptoms of the disease, such as the hæmorrhages and the remissions of the fever.

A REFLECTING CRYPTOSCOPIC "CAMERA" FOR X-RAY WORK.

IN the New York *Electrical Review* of May 23rd Mr. William Rollins publishes a copiously illustrated article on some pieces of apparatus which he calls "reflecting cryptoscopic cameras." He states that he described the first reflecting cryptoscope and the first cryptoscopic

camera in the *International Dental Journal* for July, 1896. In the present article he gives an account of two forms of this instrument, one of them being intended for examination of the feet and the other for examination of the body of a person in the horizontal position. The first of these somewhat resembles an ordinary portable writing-desk the slope of which rises more rapidly than usual. A photographic plate-holder and a fluorescent screen can be held against the under side of the slope, the plate-holder being always above the screen. A horizontal mirror lies on the bottom of the camera face upwards, so that when a foot is placed on the slope and a source of x rays is brought over it, an observer looking downwards through the side of the camera into the mirror sees the image of the foot displayed on the screen, and in this way, before placing a sensitised plate in the plate-holder, he can move the foot as may be required and can also arrange the position and direction of the light. During the exposure of the plate it may be useful to view the image produced on the screen by the rays which have traversed the plate. The other camera is hung on side rails attached to the table on which the person to be examined is lying in the horizontal position. It can, therefore, be slid under the table to any required point and the observer looking downwards into the mirror sees on the screen the image of any part which is to be inspected. The plate-holder with the sensitised plate is then introduced above the screen as before.

THE SURGEON AND THE CARPENTER.

(With due apologies.)

THE following lines have been sent to us as suggested by an address recently printed in our columns:—

The Surgeon-and-the-Carpenter
Was walking down the Strand
(The Surgeon and the Carpenter
Are one, you understand;
The Surgeon is the master Mind,
The Carpenter's the Hand).

"If things go on at such a pace,"
I heard the Surgeon say,
"Each member of the human race
Will meet the knife some day:
A terrible catastrophe."
The Carpenter said "Nay."

"At present, too," the Surgeon said,
"Physicians are so proud,
To back my own opinion
I scarcely am allowed;
Yet mine, perhaps, is worth as much
As any of the crowd.

"They seem to think," he hurried on,
"That I am only you,
And that they have a right to say
What I have got to do;
That they design the Surgeon's work
And we just 'put it through.'

Now, when you reach a certain stage,"
He further made remark,
"You grow incomparably sage"—
"Excuse me, here's the park,"
The Carpenter observed, "and see
It's very nearly dark."

The Public, who was looking on,
Meandered home to tea,
It talked about the Surgeon's words
And what he meant to be;
And said, "If he's no Carpenter,
What use is he to me?"

WANTED—A HOME.

To the Editors of THE LANCET.

SIRS,—I should be much obliged if any reader could recommend a peaceful home for a lady suffering from naso-orbital sarcoma. The home should be very comfortable and situated in beautiful country surroundings with large private grounds so that the patient could take carriage exercise unobserved in the grounds. Kent would be preferred, but any part within a few miles of Chatham would do. Accommodation would also be necessary for the nurse. The relatives would like to find lodgings or an hotel close to the home so as to be able to be with the patient all day.

I am, Sirs, yours faithfully,

June 5th, 1903. A. G.

"H. V. M." would like to know if there is any home for epileptics for the very poor unable to pay more than 2*s.* or 3*s.* weekly.

THE GENERAL MEDICAL COUNCIL AND THE SOCIETY OF APOTHECARIES.

To the Editors of THE LANCET.

SIRS,—In your account of the proceedings of the General Medical Council on May 23rd, reported in THE LANCET of May 30th, p. 1569, Mr. Brown is reported as saying, regarding the Society of Apothecaries, that "it was its statutory duty to provide qualified dispensers for medical men, but this had not been done," &c. Now, the society does provide qualified dispensers, but so many medical men employ unqualified dispensers (no doubt because they are cheaper) that we who are qualified find it difficult to obtain posts at 30*s.* per week.

I am, Sirs, yours faithfully,

June 7th, 1903. QUALIFIED DISPENSER.

*** Of late years some 300 candidates per annum have presented themselves before the London Society of Apothecaries for examination certificates as dispensers. Of these about one-half are found worthy to receive the certificates. The future of these assistants is, so far as we know, as dispensers to medical men, to hospitals, or to public infirmaries, and they find little or no difficulty, as a rule, we believe, in obtaining employment.—ED. L.

HYPNOTISM FOR INEBRIETY.

A CORRESPONDENT writes to ask us if any of our readers can supply him with any information as to the results of hypnotic suggestion in the treatment of inebriety and where such treatment could be undergone. Will any of our readers who can help our correspondent kindly do so?

An Inquirer.—It is impossible to give any very definite answer to our correspondent on the information supplied. If he will consult our advertisement columns he will be able to form a fair idea of what is usually offered.

R. H.—The exaggerated renal action cannot be taken as evidence in favour of the sample. Several "all malt" whiskies have recently been analysed in our laboratories and their claims will be found reported upon in our columns.

Physician.—A reference to our advertising columns will show that the season is from May 1st to Oct. 1st.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (15th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (16th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.) London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat Golden-square (9.30 A.M.), Soho-square (2 P.M.).

WEDNESDAY (17th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.) Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

THURSDAY (18th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat, (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (19th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.).

SATURDAY (20th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (16th).—OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Adjourned Discussion on Chorion Epithelioma (opened by Dr. Galabin). The following gentlemen have intimated their intention to take part in the discussion—Dr. H. Spencer,

Dr. A. H. N. Lewers, Dr. T. W. Eden, Mr. J. H. Targett, Dr. W. H. Tate, Dr. F. J. McCann, Dr. C. Lockyer, Dr. R. Andrews, Dr. T. G. Stevens, and Dr. H. Williamson.

WEDNESDAY (17th).—ROYAL MICROSCOPICAL SOCIETY (20, Hanover square, W.).—8 P.M. Papers: Right Hon. Lord Rayleigh: On the Theory of Optical Images, with Special Reference to the Microscope.—Dr. H. Siedentopf: On a Method of making Visible Ultramicroscopic Particles in Glass and the Application of the Method to Bacteria.—Mr. E. M. Nelson: On the Lag in Microscopic Vision. And other papers.

FRIDAY (19th).—ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND (University College, Liverpool).—10 A.M. Summer Meeting. Specimens and Papers by Prof. Patten, Mr. Jones, Dr. Kelly, Prof. A. Thomson, Dr. T. H. Bryce, Prof. Symington, Prof. A. Fraser, Dr. A. W. Campbell, Prof. Robinson, Dr. C. Addison, Dr. T. Holland, Dr. D. Morgan, and Dr. Waterston.

SATURDAY (20th).—ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND (University College, Liverpool).—10 A.M. Summer Meeting. Specimens and Papers by Mr. J. Cameron, Mr. F. G. Parsons, Prof. A. H. Young, Dr. P. Thompson, Mr. I. D. Lickley, and Dr. T. H. Bryce.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (15th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. F. Payne: Clinique. (Skin.) 5.15 P.M. Dr. A. Haig: Uric Acid as a Cause of Circulation Diseases.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. A. Saunders: Examination of the Stomach and Gastric Contents.

TUESDAY (16th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. Taylor: Clinique. (Medical.) 5.15 P.M. Dr. A. Haig: Uric Acid as a Cause of Anæmia.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Bidwell: The Immediate and Remote Results of Operations on the Stomach.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. R. Russell: Diseases of Cerebellum.

WEDNESDAY (17th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. J. Berry: Clinique. (Surgical.) 5.15 P.M. Dr. W. Carr: Meningitis in Childhood.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Robinson: Uterine Hæmorrhage.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Horton-Smith: Cases of Arrested Pulmonary Tuberculosis.

THURSDAY (18th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Clinique. (Surgical.) 5.15 P.M. Dr. P. Stewart: Hysteria and its Diagnosis.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Edwards: Renal Surgery.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (7, Fitzroy-square, W.).—4 P.M. Dr. F. P. Weber: The Clinical Varieties of Pneumothorax. (Post-Graduate Course)

CHARING CROSS HOSPITAL.—4 P.M. Dr. Mott: Medical Cases. (Post-Graduate Course.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Garrod: Demonstration of Selected Cases.

GUY'S HOSPITAL MEDICAL SCHOOL—UNIVERSITY OF LONDON (Physiological Theatre).—4 P.M. Dr. E. W. Ainley Walker: A Résumé of the Doctrine of Immunity. (Gordon Lecture.)

FRIDAY (19th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. D. Grant: Clinique. (Ear.) 5.15 P.M. Col. K. MacLeod: The Physical Requirements of the Public Services.

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Abraham: Skin Cases.

LONDON HOSPITAL MEDICAL COLLEGE (University of London) (New Clinical Theatre).—4 P.M. Mr. J. Hutchinson: Diseases in India—Elephantiasis and Madura Foot.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

The rates of subscriptions, post free, either from THE LANCET Offices or from Agents, are:—

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance. Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, MR. CHARLES GOOD, THE LANCET Offices, 423, Strand, London, W.C.

SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE. It has come to the knowledge of the Manager that in some cases higher rates are being charged, on the plea that the heavy weight of THE LANCET necessitates additional postage above the ordinary rate allowed for in the terms of subscriptions. Any demand for increased rates, on this or on any other ground, should be resisted. The Proprietors of THE LANCET have for many years paid, and continue to pay, the whole of the heavy cost of postage on overweight foreign issues; and Agents are authorised to collect, and do so collect, from the Proprietors the cost of such extra postage.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied. Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND, LONDON, ENGLAND.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 11th, 1903.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
June 5	30·20	N.E.	...	125	69	54	57	63	Fine
" 6	30·35	N.E.	...	114	63	52	50	55	Cloudy
" 7	30·30	N.E.	...	91	60	50	50	55	Overcast
" 8	30·16	E.	...	120	67	50	52	60	Cloudy
" 9	29·77	E.	0·58	112	67	52	54	55	Overcast
" 10	29·77	S.W.	0·33	77	61	55	57	58	Raining
" 11	29·80	N.E.	0·66	60	57	55	55	56	Overcast

During the week marked copies of the following newspapers have been received: *Highland News, Western Daily Press, Evening Leader (Newcastle), Referee, Derbyshire Courier, Derbyshire Times, Reading Mercury, Herts Advertiser, Times of India, Aberdeen Weekly Free Press, Daily Mail, South Wales Echo, Westminster Gazette, Dublin Daily Independent, Dublin Express, Margate and Ramsgate Gazette, Yorkshire Post, Hertfordshire Mercury, Exeter Express, Burnley Express, Dublin Evening Telegraph, Echo, Bradford Observer, Daily Express, Globe, Lincoln Herald, Windsor and Eton Express, &c.*

Communications, Letters, &c., have been received from—

A.—Mr. G. T. Arnold, Torquay; Mr. W. F. Abbott, Folkestone; Messrs. Allen and Hanburys, Lond.; *Archives de Thérapeutique*, Paris; A. S. R.; A. M. D.; Dr. H. Adamson, Beechworth, Australia; A. G.; Apollinaris Co., Lond.

B.—Dr. A. L. Benedict, Buffalo; Dr. Charles B. Beevor, Lond.; Mr. A. H. Burgess, Manchester; Dr. A. T. Brand, Driffield; Mr. Stanmore Bishop, Manchester; T. B. Browne, Ltd., Lond.; Messrs. C. Barker and Sons, Lond.; Messrs. Boulton and Paul, Norwich; Mr. H. T. Bull, Bury; Borough Hospital, Birkenhead, Secretary of; Captain G. D. Browning, R.A.M.C., Alton; Bristol General Hospital, Secretary of; Birmingham City Asylum, Medical Superintendent of; Dr. T. B. Broadway, St. Austell; Birmingham and Midland Hospital for Skin and Urinary Diseases, Secretary of; Bromley, East, Vicar of; Messrs. Burroughs, Wellcome, and Co., Lond.

C.—Cuba, Chief Sanitary Officer of; Messrs. Cosenza and Co., Lond.; Mr. A. W. S. Curties, Wakefield; County Borough of Southampton, Town Clerk of; C. G. S.; Messrs. A. H. Cox and Co., Brighton; Dr. G. E. J. Crallan, Bournemouth; Church Sanitary Association, Hon. Secretary of; Messrs. S. Clark and Co., Lond.; Messrs. T. Christy and Co., Lond.; Dr. A. Campbell, Lond.

D.—Messrs. Davies, Gibbins, and Co., Derby; Denver Chemical Manufacturing Co., Lond.; Mr. G. T. de Fraine, Aylesbury; Mr. J. Q. Donald, Colinsburgh; Mr. Dale, Stockton Heath; Dr. S. J. Dickens, Cowfold; Deaf and Dumb, Association for Oral Instruction of, Secretary of; Mr. M. S. Dodd, Newcastle-on-Tyne; Dermatological Society, Hon. Secretary of.

E.—Captain H. M. Earle, I.M.S., Dharamsala, India; Messrs. Evans, Gadd, and Co., Bristol; Dr. F. W. Eldridge-Green, Lond.; Dr. E.; Dr. G. L. Eastes, Lond.; Mr. E. A. Edington, Worthing; An Enquirer.

F.—Dr. T. Fisher, Bristol; Messrs. Fairchild Bros. and Foster, Lond.; Mr. P. Furnival, Lond.

G.—Monsieur M. George, Meudon; Dr. T. R. Glynn, Liverpool; Great Eastern Railway Co., Continental Traffic Manager of; Dr. J. W. Greenwood, Hanley; Rev. H. M. Green, Lond.; Messrs. Graham and Shepherd, Sunderland; Glasgow Southern Medical Society, Secretary of; Sir W. Gowers, Lond.

H.—Mr. H. S. Harris, Esher; Hunterian Society, Hon. Secretary of; Dr. R. Henchley, Canterbury; Dr. T. K. Herschel, Bordighera, Italy; Humanitarian League; Mr. E. J. Hynes, Huddersfield; Mr. W. Hughes, Carnarvon.

J.—Dr. R. Jones, Woodford Bridge; Mrs. W. Johnson, Northallerton; Jansenville, Cape Colony, District Surgeon of; J. S.; Jenner Institute, Governing Body of.

K.—Dr. L. Kidd, Enniskillen; Mr. A. D. Kennard, Hampton Wick.

L.—Dr. D. Lawson, Banchory; Mr. H. K. Lewis, Lond.; Mr. B. M. Lewis, Pontypridd; Captain Clayton Lane, I.M.S.; Lieutenant T. B. Lauder, R.A.M.C., Rangoon; Mr. H. Littlewood, Leeds.

M.—Mr. F. C. Madden, Cairo; Medical Society of Victoria, Melbourne, Hon. Secretary of; Manchester Medical Agency, Secretary of; M. J.; Manchester Royal Infirmary, Secretary of; Dr. R. W. S. Martin, Brithdir; Moseley's Food, Ltd., Stockport; Maltine Manufacturing Co., Lond.; Mr. T. Marshall, Lond.; Messrs. H. Muller and Co., Lond.; Monkwearmouth Hospital, Sunderland, Secretary of; Messrs. J. Macfarlan and Co., Lond.

N.—National Dental Hospital and College, Lond., Secretary of; Newport Hospital, Secretary of; North Staffs Infirmary, Stoke-on-Trent, Secretary of; Mr. J. C. Needes, Lond.; Mr. H. Needes, Lond.; National Sanatorium for Consumption, Bournemouth, Secretary of.

P.—Dr. M. E. Paul, Alderney; Messrs. C. Pool and Co., Lond.; Mr. Y. J. Pentland, Edinburgh; Pastel Society, Secretary of; Dr. G. W. Parker, Hove; Messrs. S. Pownceby and Co., Lond.; Parish of St. Mary, Islington, Clerk of; Pentonville-road (27), Lond.; Mr. S. Phillips, Lond.; Dr. G. Peacock, Dublin; Dr. J. F. Payne, Lond.

Q.—Qualified Dispenser.

R.—Royal Society, Secretary of; Royal Surrey County Hospital, Guildford, Secretary of; Royal Albert Edward Infirmary, Wigan, Secretary of; Mr. R. Redpath, Newcastle-on-Tyne; Royal Hospital for Women and Children, Secretary of; Mr. R. W. Rees, Llandudno.

S.—Mr. E. Schloesser, Wiesbaden; Messrs. Spottiswoode and Co., Lond.; Mr. H. Smale, Lond.; Messrs. Savory and Moore, Lond.; Shredded Wheat Co., Lond.; Dr. H. Shelmerdine, Bexley Heath; Captain R. Selby, Malappuran, India; Dr. E. W. Samways, Brides-les-Bains; Miss Shepherd, Gersau; Scholastic, Clerical, &c., Association, Lond.; Mr. E. Schweizerbart, Stuttgart; Mr. J. A. Smyth, Lond.; Mr. B. S. Story, Durham.

T.—Dr. E. Trevithick, Cheltenham; Dr. J. C. Thresh, Chelmsford.

V.—Vinolia Co., Lond.

W.—Messrs. W. Watson and Co., Lond.; West Bromwich District Hospital, Secretary of; Messrs. Wright, Dain, and Co., Birmingham; Mr. B. Wheeler, Manchester; Messrs Willing, Lond.; Messrs. R. F. White and Son, Lond.; Mr. J. Ward, Lond.; Dr. G. Morton Wilson, Conway; Mr. J. Wanamaker, New York; Messrs. H. Walker and Son, Lond.; Dr A. Whitfield, Lond.; Dr. R. Wilkinson, Norwood; Dr. F. J. Waldo, Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. H. Ashley, Portsmouth; Mr. J. E. Anderton, New Mills; A. J. R. O.; A. A. B.; A. W. B.

B.—Dr. D. F. Brown, Greenock; Mr. C. Birchall, Liverpool; Mr. A. A. Bradburne, Lond.; Dr. F. W. Burton-Fanning, Norwich; Mr. H. A. Bruce, Toronto; Mr. G. C. Bell, Frinton-on-Sea; Mr. H. E. Branch, Cheltenham; Mr. A. H. Buck, Brighton; Broad-street (30), Barry; Beckett Hospital, Barnsley, Hon. Secretary of.

C.—Mr. J. A. Crichton, Annan; Dr. A. Collie, Forey, France; Dr. S. G. Champion, Brockweir; Messrs. J. and A. Carter, Lond.; Messrs. A. Cohen and Co., Lond.; Clayton Hospital, Wakefield, Hon. Secretary of; Sir W. J. Collins, Lond.; C. and B.; C. D. H.; C. E. W.

D.—Dr. T. A. Davies, Martham; Mr. J. T. Davenport, Lond.; Messrs. A. De St. Dalmas and Co., Leicester; Mr. T. Dixon, Lond.

E.—Messrs. Evans, Sons, Lescher, and Webb, Lond.; E. G. D.; E. S.; E. S. W.; E. I. D.

F.—Fairford Retreat, Gloucester, Medical Superintendent of.

G.—Mr. W. Greene, Monkstown; Dr. J. Gillan, Ryhope; G. T. M.; Mr. T. Gray, Pontypridd; G. T.; G. P., Lond.

H.—Mr. C. C. Haviland, Frimley Green; Dr. A. Holt, Lond.; Messrs. J. Haddon and Co., Lond.; Holloway Sanatorium, Virginia Water, Secretary of; Mr. E. S. Hawthorne, Mudgee; Horton Infirmary, Banbury, Secretary of; H. S.; H. G. S.; Dr. G. Nicol Henry, Lond.; Mr. C. Harrison, Burton-on-Trent; H. H. W.; Mr. H. A. Hall, Rotherfield.

I.—Invernith Lodge, Colinsburgh, Medical Superintendent of.

J.—Mr. W. H. H. Jessop, Lond.; J. W. U.; J. P. W.; J. N. W.; J. D. M.; J. D. P.; J. T. C. C.; J. M. D.; J. P. M.; J. A. G.; J. E.

K.—Kronthal Waters, Ltd., Lond.; Kunstverlag Monachia, Munich.

M.—Mr. G. E. Mould, Rotherham; Medicus, St. Annes-on-Sea; Mr. R. Mosse, Berlin; Messrs. Mills, Fairweather, and Co., York; Dr. G. Mack, Kettering; Messrs. Moody and Woolley, Derby; Mildmay Nursing Institute, Lond.; Dr. R. Millar, Hooton Pegmell; Dr. W. J. McCardie, Birmingham; Dr. J. E. Middlemass, Bradford; Mr. F. Markfeldt, Hastings.

N.—North Devon Infirmary, Barnstaple, Hon. Secretary of; N., Lond.

O.—Odontological Society, Lond., Librarian of; Messrs. Offord and Sons, Lond.

P.—Mr. A. Pellant, Lond.; Perton, St. Leonards-on-Sea; Dr. W. H. Packer, Cressage; Mr. T. Prince, Lond.; Rev. W. Petter, Lond.

R.—Mr. T. H. Rockwell, Lond.; Royal College of Physicians of Ireland, Dublin, Registrar of; Mr. J. Round, Lond.

S.—Mr. J. Sampson, York; Messrs. Spiers and Pond, Lond.; Messrs. T. and H. Smith and Co., Edinburgh; Mr. R. J. L. Sladen, Igatpuri, India; Dr. A. Sander, Chicago.

T.—Mr. J. L. Thomas, Blaengarw; Mr. A. J. Tayler, Northwich; Mr. J. Thin, Edinburgh; Dr. W. Thyne, High Barnet; T. W. C.

W.—Mr. A. P. Walters, Isle of Rigg; Mr. Willeby, Bedford; Weston-super-Mare Hospital, Secretary of; W. F. M.; Dr. W. H. Wigham, South Molton; Messrs. H. Wilson and Son, Lond.; Dr. T. O. Wood, Lond.; Dr. J. C. Wilson, Blantyre.

EVERY FRIDAY.

THE LANCET.

PRICE SEVENPENCE.

SUBSCRIPTION, POST FREE.

FOR THE UNITED KINGDOM.		TO THE COLONIES AND ABROAD.	
One Year	£1 12 6	One Year	£1 14 8
Six Months	0 16 3	Six Months	0 17 4
Three Months	0 8 2	Three Months	0 8 8

Subscriptions (which may commence at any time) are payable in advance.

ADVERTISING.

Books and Publications ...	Seven Lines and under	£0 5 6
Official and General Announcements	Ditto	0 5 0
Trade and Miscellaneous Advertisements	Ditto	0 4 6
	Every additional Line	0 0 6

Quarter Page, £1 10s. Half a Page, £2 15s. An Entire Page, £5 5s.

Terms for Position Pages and Serial Insertions on application.

An original and novel feature of "THE LANCET General Advertiser" is a Special Index to Advertisements on pages 2 and 4, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 31 Rue Bapts, Asnières, Paris.